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ABSTRACT

The extent to which juvenile delinquents differ significantly from non-delinquents and probationary-delinquent adolescents in terms of self-esteem and self-concept levels, attitudes toward school, levels of school achievement and failure was investigated. Male students between the ages of 14 and 16 attending three schools in two towns in British Columbia made up the study's sample population. A total of 120 comprised the sample, 40 randomly selected from each of the three schools. Test materials supplemented school records as well as seven tests which gathered data on achievement and self-concept, six subscales of one instrument which provided data on attitudes toward school, and another instrument whose index supplied anxiety data. Results indicated that: (1) delinquent juveniles differed significantly on all factors as compared to probationary-delinquent and non-delinquent adolescents; (2) the delinquent subjects had significantly higher feelings of anxiety; and (3) the delinquents repeated a significantly greater number of grades, thereby failing in school significantly more often, and had significantly lower reading skills and achievement levels as compared to the other groups. Conclusions are that: (1) juvenile delinquency is identifiable by a specific pattern of factors; (2) the factors studies are significantly associated with juvenile delinquency; and (3) that study results empirically support Glasser's theoretical position that school failure and delinquency are significantly associated. (Author)

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ABSTRACT

SCHOOL FAILURE, SCHOOL ATTITUDES AND THE SELF-CONCEPT IN DELINQUENTS

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ABSTRACT

The basic problem of the investigation focused on the questions whether juvenile delinquency could be identified by a specific pattern of factors and, secondly, if a pattern of factors was amenable to identification, whether the variables were significantly associated with delinquency. The purpose of the study was to assess the extent to which juvenile delinquents differ significantly from non-delinquents and probationary-delinquent adolescents in terms of self-esteem and self-concept levels; attitudes toward school; levels of school achievement; school ability, anxiety, and academic achievement and failure. Achievement of this purpose was expected to shed light on Glasser's contention concerning the association between school failure and delinquency and other concomitants of delinquency.

The investigation was specifically designed to test eight major hypotheses: (1) that delinquent adolescents have significantly lower I.Q., achievement, and reading skills levels than probationary-delinquent and non-delinquent youth; (2) that delinquents have significantly higher levels of anxiety than probationary-delinquent and non-delinquent adolescents; (3) that delinquents have significantly lower levels on measures of self-esteem than probationary-delinquent and non-delinquent youth; (4) that delinquents

repeat a significantly greater number of grades and thus fail in school significantly more often than probationary-delinquent and non-delinquent adolescents; (5) that probationary delinquents have significantly lower I.Q., achievement, and reading skills levels than non-delinquent adolescents, but significantly higher levels than delinquent youth; (6) that probationary-delinquent adolescents have significantly lower levels of self-esteem than non-delinquents but significantly higher levels as compared to delinquents; (7) that probationary-delinquent adolescents have significantly poorer school attitudes than non-delinquents, but significantly better attitudes as compared with delinquent juveniles; and (8) that probationary delinquents repeat a significantly greater number of grades and thus fail in school significantly more often as compared to non-delinquents, but repeat a significantly lower number of grades as compared to delinquent adolescents.

Male students between the ages of 14 and 16 attending three schools in two towns in British Columbia made up the study's sample population. A total of 120 subjects comprised the sample, 40 randomly selected from each of the three schools. Test materials supplemented school records. Seven tests were employed to gather data on achievement and self-concept. Six subscales of one instrument provided data on attitudes toward school and another instrument and an index supplied anxiety data.

Important findings derived from data analysis and

statistical testing of the study's hypotheses. Seven of the eight hypotheses were empirically verified. The investigation concluded that delinquent juveniles differed significantly on all factors as compared to probationary-delinquent and non-delinquent adolescents. In other words, as compared to non-delinquents and probationary delinquents, the delinquent subjects had significantly lower I.Q.s and levels of self-esteem and significantly higher feelings of anxiety. In addition, they repeated a significantly greater number of grades--thereby failing in school significantly more often--and had significantly lower reading skills and achievement levels as compared to the other groups.

The study concluded (1) that juvenile delinquency could be identified by a specific pattern of factors; (2) that the factors included in the study were significantly associated with juvenile delinquency; and (3) that the results of the study empirically supported Glasser's theoretical position.

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CHAPTER I

INTRODUCTION

Researchers have long sought explanations for juvenile delinquency.[1] The need to identify the characteristics of delinquents has been a major prerequisite to finding meaningful and relevant explanations. However, identification has been seriously hampered by a tendency toward vagueness and ambiguity. Even the phrase "juvenile delinquency" frequently connotes disparate meanings.

Different scientific disciplines have defined the phenomenon in different terms. Sociologists, for example, regard delinquency as an expression of internalized norms of a deviant subculture which places the individual in conflict with the values of the greater society.[2] In legal terms, on the other hand, a juvenile delinquent is a youth or adolescent who has broken the law and been convicted of a crime. Psychologists explain the phenomenon primarily in terms of personality disorders while medical doctors attribute it to

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[1]Norman E. Silberberg and Morris C. Silberberg, "School Achievement and Delinquency," Review of Educational Research 41 (February 1971): 17-33.

[2]Joseph Clark and Ellen Wenninger, "Goal Orientations and Illegal Behavior among Juveniles," Social Forces 13 (1963): 351-57.

physiological malfunctionings.[3]

The etiology of the phenomenon of juvenile delinquency is not clear because of the imprecise, vague, and ambiguous factors that help to identify it. Researchers have attempted to differentiate the experiences of delinquent from nondelinquent adolescents in order to provide alternative experiences for potential delinquents and enable such individuals to find increased fulfillment and a more satisfactory life style. Such attempts have not attained their goals, however, because the studies have been seriously hampered and negatively influenced by the problem of definitions.

It appears that the phenomenon of juvenile delinquency has eluded definition because identifying characteristics relate not to one, but to several, different scientific disciplines. Sociological, psychological, educational, and psychiatric factors may combine, for example, ultimately to create the delinquency condition.

Recent research results have suggested such a possibility. Studies conducted in the last few years have focused on combinations of factors. Of all the variables considered, however, several have appeared more peculiar to delinquents than all the others. Among these are low levels

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[3]Henry Forssman and George Hambert, "Chromosomes and Antisocial Behavior," Excerpta Criminologica 7 (1967): 113-67; also L. Tarnopol, "Delinquency and Minimal Brain Dysfunction," Journal of Learning Disabilities 3 (1970): 200-207.

of self-esteem and self-concept; failure in school; poor and anti-social attitudes; level of anxiety and stress; and faulty self-identification.

Of the earlier research studies, Glasser's studies are perhaps the most outstanding.[4] Glasser concluded that the characteristics most typical of delinquents were low self-esteem and school failure. According to this view, individuals who come into conflict with society have strongly established failure identities; the place where such an identification begins is in the school.

> Combined with poverty . . . , a broken home and poor relationships with one's parents, and most of all . . . combined with school failure, the restricted opportunities that exist for non-whites can be a very serious contribution to failure. If school failure does not exist, other handicaps can be more easily overcome.[5]

According to Glasser, the characteristic most common to those on a failure course is that they deny the reality of the world about them. Denial can range from simple rejection of the rules of one's society to complete alienation from the society as a whole. Other sociological theories useful for explaining and for identifying variable associations with delinquency are opportunity theory, differential association, neutralization theory, and labeling

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[4]William Glasser, Reality Therapy (New York: Harper and Row, 1965); William Glasser, Schools without Failure (New York: Harper and Row, 1969); and William Glasser, "The Reality Frontier: Reality Therapy," Saturday Review (March 6, 1965): pp. 54-57.

[5]Glasser, Schools without Failure, p. 26.

theory.[6]

While many have hypothesized a relationship among such variables as self-concept, self-esteem, academic achievement, attitudes toward school, and anxiety, few research data were found that specifically concerned this subject area. Empirical data positively establishing such relationships are simply not to be found.

Statement of the Problem

The basic problems of the investigation focused on the question whether juvenile delinquency could be identified by a specific pattern of factors and, secondly, if a pattern of factors was amenable to identification, whether the variables were significantly associated with delinquency.

Background of the Problem

The problem of delinquency among adolescents has continued to accelerate. For those young people who come to the attention of the courts and are subsequently labeled "delinquent," treatment usually involves placement in a reformatory or training school. Today, emphasis in these correctional institutions is placed on rehabilitation through vocational training and counseling.[7]

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[6]Albert K. Cohen, Delinquent Boys: The Culture of the Gang (Glencoe, Ill.: Free Press, 1955); and Edwin H. Sutherland and Donald R. Cressey, Criminology, 9th ed. (Philadelphia: J. B. Lippincott, 1974), pp. 75-77.

[7]Roger Woodbury and C. M. Achilles, "Schools and Delinquency: Where Are We Going Now?" NASSP Bulletin 59 (January 1975): 29-36.

The rehabilitation process appears to involve many inherent difficulties. First, placement in an institution has been demonstrated as confirming the delinquent in his perception of rejection by society. In addition, the adolescent may be thrown among more experienced offenders who confirm his antisocial values and deviant norms. Third, adults who attempt to rehabilitate may themselves have a completely different set of standards and represent another agent of authority.[8]

Although a number of innovative experiments have been undertaken to find a solution to the delinquency problem, they have had relatively little success. Group therapy has appeared, however, to offer some cure potential.

It remains true that the greatest challenge insofar as delinquency is concerned is prevention. Experiments at the neighborhood community group level, social programs, recreational programs, and various other federal and government-sponsored efforts have been launched. Most, if not all, have had disappointing results.

It would appear, thus, that efforts to treat and prevent juvenile delinquency have met with little, if any, measurable success. It would seem that the crux of the problem may well center on the lack of precise definition and

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[8]Edwin M. Lemert, "Juvenile Justice: Quest and Reality," Transaction 4 (July/August 1967): 30-40; also Frank Hardt and Paul R. Peterson, "Arrest of Self and Friends as Indicators of Delinquency Involvement," Journal of Research in Crime and Delinquency 5 (1968): 44-51; also, Donald R. Cressey and David A. Ward, Delinquency, Crime, and Social Process (New York: Harper and Row, 1969).

identification of a distinct pattern of characteristics influencing and identifying the phenomenon. It is a well known fact that no malady can be remedied if definitions are vague and unclear and if etiology has not been precisely established in terms of significantly contributing factors.

Theoretical Framework of the Study

The available literature has substantially documented the contention that the need to strive for individual identity--that is, to know oneself and to gain a positive image of the self--is a universal human characteristic.[9] But because deviance and delinquency were for so long attributed to physiological malfunctionings or psychological maladaptation no connection between the two was hypothesized or studied seriously.

Recognition of the existence of the situational self has in recent years led to new perspectives on deviance, juvenile delinquency, mental health, and the unity of the self.[10] As a consequence, delinquency and deviance, once viewed as the outcome of some basic deficiency, has been

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[9]Andrew T. Wylie, The Self-Concept (Lincoln: University of Nebraska Press, 1961; also Arthur T. Jersild, In Search of Self (New York: Teachers College Bureau Publications, Columbia University, 1952); and Robert D. Laing, The Divided Self (New York: Random House, 1969); George H. Mead, Mind, Self, and Society (Chicago: University of Chicago Press, 1944).

[10]Albert Bandura, "Social Learning Theory of Identificatory Processes," in David A. Goslin (ed.), Handbook of Socialization Theory and Research (Chicago: Rand McNally, 1969), pp. 213-62.

increasingly interpreted as situational in origin. Just as many of the "crazy" responses of mentally ill persons have now come to be viewed as normal responses to abnormal environments, so too have the juvenile's "delinquent" responses come to be perceived as normal responses to delinquent environments.

Research studies on the delinquency phenomenon in the past few decades have, thus, increasingly espoused the view that mental health presupposes a concept of the self that includes components of competence, esteem, and constructive productivity.[11]

Anxiety and the presentation of a self-image that more closely approximates the ideal soon becomes a major preoccupation of the maladjusted, delinquent youngster.[12] Indeed, the self-defeating results of maladjusted self-concept patterns are both persistent and pervasive; they are motivated by impaired self-perceptions and painful anxiety feelings.

Goldenson's research has suggested that the adolescent's self-concept is, in fact, a fairly good indicator of his state of mental health--that is, low self-concept is highly correlated with a variety of negative phenomena such as maladjustment, deviance, delinquency, drug abuse, and

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[11]James F. Feldhusen, Thomas Denny, and Charles F. Condon, "Anxiety, Divergent Thinking, and Achievement," Journal of Educational Psychology 56 (1965): 40-45.

[12]Stephan B. Sarason, Anxiety in Elementary School Children (New York: Wiley and Sons, 1960).

psychopathological behavior. A highly positive level of self-concept significantly relates to autonomy, a healthy mental frame of reference, and a positive level of achievement motivation, among other variables.[13] The literature basically substantiates this point of view.[14]

Thus, whether the adolescent's self-concept is negative or positive makes a significant difference in the area of academic achievement. Glasser's and other studies have clearly noted both sides of the issue. Briefly, mentally healthy adolescents will be productive, feel competent, enjoy learning experiences, and find fulfillment in group efforts; students with low self-esteem, on the other hand, will tend toward underachievement, will retain inferiority and guilt feelings, will become alienated from themselves and the school group as a whole and will, sooner or later, acquire self-defensive adjustments that are, in the end, significantly self-defeating.

Glasser's findings were derived from research investigations and clinical experiences related to reality therapy. Reality therapy essentially maintains that man has two

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[13]Robert M. Goldenson, An Encyclopedia of Human Behavior: Psychology, Psychiatry, and Mental Health (New York: Doubleday, 1970).

[14]Donald W. MacKinnon, "The Highly Effective Individual," Teachers College Record 51 (1960): 367-78; T. A. Brodie, "Attitude Towards School and Academic Achievement," Personnel and Guidance Journal (December 1964): 375-78; Leonard Douglas, "A Comparative Analysis of the Relationships between Self-Esteem and Certain Selected Variables among Youth from Diverse Racial Groups," (Ph.D. dissertation, University of Michigan, 1969).

basic psychological needs: to love and be loved; and to feel worthwhile to the self and to others. If these needs are fulfilled, the development of a successful, healthy, identity becomes possible. Conversely, if unfulfilled, a failure identity may develop.

Those in a failure pattern have been found to follow two pathways separately or simultaneously: withdrawal and delinquency. Individuals on the extreme ends of these pathways, because they are unable to fulfill their basic needs, are to be found in mental hospitals, prisons, and psychiatric clinics, for the most part. A common characteristic of all individuals embarked on the failure pathway is in Glasser's theory denial of the reality of the surrounding world.

In sum, the theoretical framework of the study was based to a large extent on Glasser's theory. This orientation stressed the importance of several variables as means of identifying juvenile delinquency. Such factors as school achievement, school attitude, self-esteem and self-concept, and level of anxiety were regarded as having significant direct and indirect impact on the incidence of the delinquency phenomenon.

Significance of the Problem

School experiences have been viewed as critical determinants of delinquent behavior. Such Glasserian views have gained widespread acceptance; their influence on practicing teachers through workshops and in-service training

has increased in recent years.

While Glasser's basic theory appears to have the potential for eventually defining the delinquency phenomenon precisely, it has been criticized; it may well be that his position is far too simplistic to rank as a complete answer to such a complex and multi-facted problem. Until his views can be empirically validated, no one can meaningfully evaluate his hypotheses one way or another. The present investigation relates to this need. It can help to fill the gaps in the existing literature and lead, eventually, to validation--or refutation--of Glasser's views. In this sense, the significance of the study relates to the fields of education, sociology, and psychology generally and to educational theory and research specifically.

Significance also lies in the study's potential for affirming or refuting certain school policies. Many schools in the United States still subscribe to the theory that students should not be promoted from one grade level to the next until certain skills and competencies have been mastered. This is true despite research indicating that such a process can adversely effect the learning attitudes of the child. If the present investigation can help to demonstrate that such a policy is unwittingly contributing to a higher incidence of juvenile delinquency, school policies may change; additional precautions may be taken with regard to students already failing or on the verge of failing.

Purpose of the Study

The purpose of the present investigation was to assess the extent to which juvenile delinquents differed significantly from non-delinquents in terms of self-esteem and self-concept levels; attitudes toward school; levels of school achievement; school ability, and academic achievement. Achievement of this purpose was expected to shed light on Glasser's contention concerning the association between school failure and delinquency and other concomitants of delinquency.

Need for the Study

In spite of the concern shown by many as regards identification of specific factors influencing the phenomenon of juvenile delinquency, little empirical information relating specifically to factor pattern delineation was found in the available literature. Many studies have, however, pointed to a definite need for such factor identification and for the development of a set of guidelines for assessing all component elements of the delinquent personality thus leading to more precise definition.[15]

Clearly, meaningful trait pattern identification and

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[15]Arthur T. Jersild, The Psychology of Adolescence (New York: Macmillan, 1963); James Feldhusen, "Prediction of Delinquency, Adjustment, and Academic Achievement over a Five-Year Period with the Kvarceus Delinquency Proneness Scale," Journal of Educational Research 65 (April 1973): 375-81; and Dean E. Frease, "The Schools, Self-Concept, and Juvenile Delinquency," British Journal of Criminology, 12 (1972): 133-46.

prediction of the incidence of juvenile delinquency may be strongly correlative. Such information could be most useful to those schools currently experiencing significantly increased incidence of delinquency--especially schools in inner-city areas. The need and the importance of the present investigation, thus, lie in its possible utility value.

Definitions of Terms

The following terms and designations were specifically defined for the purposes of the investigation:

1. Delinquent youth: any adolescent male between the ages of 14 and 16 who has repeatedly committed anti-social acts, been placed on probation by the courts, and later sentenced by a court because of violation of probation.

2. Juvenile delinquency: in general terms, an expression of the internalized norms of a deviant subculture that places the youth in conflict with the values of the larger society.[16] For the purposes of the present investigation, however, the phrase relates to Dietz's interpretation: "juvenile delinquency is construed to represent a loosely formulated syndrome of emotionally disturbed behaviors that arise out of faulty interpersonal relationships

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[16]Ruth R. Morris, "Attitudes Toward Delinquency by Delinquents, Non-Delinquents, and Their Friends," British Journal of Criminology 5 (1966): 249-63; George H. Darling, "The Delinquent in the School," Clearinghouse, 37 (1967), pp. 483-86; and Fred Closson, "Delinquency: Its Prevention Rests upon the Academic Community," Clearinghouse, 45 (1971), pp. 133-46.

originating within the family complex. . . . The basic assumption is that juvenile delinquency is a manifestation of personal and social maladjustment . . ."[17] One is dealing, in short, with status offenders rather than those who commit acts that would make them culpable as adults.

3. Probationary delinquent youth: in the present study, any adolescent male between the ages of 14 and 16 who has come to the attention of the police because of anti-social behavior and who has subsequently been placed on probation by a Juvenile Court.

4. School failure: operationally defined for the study as failure to be promoted one or more grades, with such failure documented in school records.

5. Self-Concept: in Coopersmith's definition, a construct employed in the study with the following meaning:

> . . . the evaluation which the individual makes and customarily maintains with regard to himself: it expresses an attitude of approval or disapproval and indicates the extent to which the individual believes himself to be capable, significant, successful, and worthy. In short, self-esteem is a personal judgment of worthiness that is expressed in the attitude the individual holds towards himself. . . . It is a subjective experience which the individual conveys to others by verbal report and other overt expressive behavior.[18]

The term has been operationally defined by scores derived from tests designed to measure intelligence, achievement,

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[17]George E. Dietz, "A Comparison of Delinquents with Non-Delinquents on Self-Concept, Self-Acceptance, and Parental Identification," Journal of Genetic Psychology, 115 (1969): 285-95.

[18]Stanley Coopersmith, "A Method for Determining Types of Self-Esteem," Journal of Abnormal Social Psychology, 59 (1959): 87-94.

school competencies and abilities, and attitudes to school.

Research Hypotheses

The present investigation was specifically designed to test the following hypotheses:

1. That delinquent adolescents have significantly lower I.Q. scores, achievement scores, and reading scores, as operationally defined by the test instruments of the study, than probationary-delinquent and non-delinquent youth.

2. That delinquent youths have significantly higher levels of anxiety, as operationally defined by scores on the test instruments, than probationary-delinquent and non-delinquent youths.

3. That delinquent adolescents have significantly lower scores on tests designed to measure self-esteem than probationary-delinquent and non-delinquent adolescents.

4. That delinquent youths repeat a significantly greater number of grades, with failure operationally defined by school records, than probationary-delinquent and non-delinquent adolescents.

5. That probationary-delinquent adolescents have significantly lower I.Q. scores, and achievement and reading scores--as operationally defined by the test instruments of the study--than non-delinquent youths, but significantly higher scores than delinquent youngsters.

6. That probationary-delinquent adolescents have significantly lower self-esteem scores than non-deliquent youths but significantly higher scores as compared to

delinquent adolescents.

7. That probationary-delinquent youths have significantly poorer school attitudes--as operationally defined by scores on test instruments--than non-delinquents, but significantly better attitudes as compared with delinquent adolescents.

8. That probationary-delinquent adolescents repeat a significantly greater number of grades as compared to non-delinquent youngsters, but repeat a significantly lower number of grades as compared to delinquent juveniles.

Assumptions

The study assumed, first, that the sample population was a valid representation of the total general population from which they were randomly selected.

Second, it was assumed that the study would produce statistically significant results and that the hypotheses posited by the investigation would thus be confirmed.

Finally, the position taken by the study was that self-concept reflects in large measure the opinions held by significant others--and that the "significant others" were primarily teachers. Thus the investigation assumed that school is an important social structure and that academic success represents one of the more important values for students. It is important to note, however, that the study did not attempt to shed light on the issue of the causes of delinquency; rather, an attempt was made to examine in depth

the concomitants associated with delinquency.

Limitations of the Study

The study was limited, first, to that body of data that could be obtained from a randomly selected group of 120 male students, the study's sample population. The study was limited to male students since most violent school acts are perpetrated by such students. The study was also limited to that quantity of data that could be derived from the test instruments and school records.

It should be noted in this respect that one is dealing with delinquents officially labeled as such. Such a focus on labeling represents a further limitation of the study. Further limitations have to do with unknown variables that were not taken into consideration and that could change the results, and the cross-sectional nature of the research.[19] One is thus not positing a causal model of juvenile delinquency, but rather is conducting a study confined to associated concomitants of delinquency. The significance of such limitations is further discussed in Chapter III.

The small size of the population from which the sample was selected suggests, finally, that generalizations from the study's findings should be made with caution.

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[19] Arthur J. Lien, Measurement and Evaluation of Learning (Dubuque, Ia.: W. C. Brown, 1971); also Barry F. Anderson, The Psychology Experiment: An Introduction to the Scientific Method (Belmont, Cal.: Brooks/Cole, 1966).

Organization of the Study

This study was divided into five chapters. Chapter I presents the statement of the problem, theoretical rationale, significance of the problem, purpose of the study, definition of terms, major hypotheses, assumptions and limitations, and organization of the study. The survey of related research and literature was to be summarized in Chapter II. Chapter III discusses the methods and procedures of the study, including the demographics and a description of the subjects, materials, procedures for collecting data, a description of the test instruments, and statistical techniques of the investigation. Chapter IV sets forth the findings of the study through analysis of the data collected. The summary, conclusions, and recommendations of the study comprise Chapter V.

Summary

This chapter served to introduce the problem of the study. It was noted that the study's basic problem focused on the question whether juvenile delinquency was amenable to factor pattern delineation. It was also pointed out that the theoretical framework of the study was chiefly based in the theories of Glasser, who suggested that several important variables were significantly associated with juvenile delinquency; the most important was said to be the school environment. The purpose of the study was seen as focusing on assessment of the extent to which juvenile delinquents

significantly differed from probationary-delinquent and non-delinquent adolescents in terms of self-esteem, self-concept, school attitudes, school ability, and school achievement.

CHAPTER II

REVIEW OF RELATED LITERATURE

Authorities generally agree that delinquency often has its beginnings in the school years even though its most serious manifestations usually occur during adolescence.[1] It is simple enough to define delinquent acts--such as stealing, physical aggression, and vandalism--but all these behaviors may have quite different psychological, physiological, social, and biological roots in the individual organism.

Key variables related to delinquency have been noted in contemporary research and theory. For example, self-concept, self-esteem, failure in school, ability in school, academic attitudes, and anxiety are the more important factors believed today to be associated with delinquency among juveniles.

The literature reviewed in this chapter concerns

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[1]Lewis T. Empey, "Delinquency Theory and Recent Research," Journal of Research in Crime and Delinquency 4 (January, 1967): 32-42 ; also James Toby, "An Evaluation of Early Identification and Intensive Treatment Programs for Predelinquents," Social Problems 13 (1965): 160-75; and James Walker, "An Attitudinal and Biographical Comparison of Delinquent and Non-Delinquent Children in Salt Lake County," (Ph.D. dissertation, University of Utah 1973).

itself with these variables. The chapter examines, first, the literature related to the nature of self and self-concept in a general context. Self-concept as an intervening variable in outcome behavior comes under discussion next. A third subsection reviews the literature on general causes and combinational factors related to the phenomenon of juvenile delinquency; a subsequent section examines the relationship of anxiety to school attitudes, academic achievement, and delinquency. The more important trends observed in the literature are summarized in the final subsection of the chapter.

General Literature on Self, Self-Concept, and Self-Concept Formation

The literature related to self and self-concept is extensive. It may thus be discussed aspect by aspect.

General Definitions of Self

To be human in modern society is to have a self--an inner, unchanged personal identity that remains essentially the same in spite of the vicissitudes of social experience.[2] According to this view, the self is the thinker of one's thoughts, the sufferer of one's feelings, and the planner of one's actions.

The subject of self has been examined extensively

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[2]Erving Goffman, Presentation of the Self in Everyday Life (Garden City, New York: Doubleday, 1959).

for many years.[3] The more recent literature has generally held that man is endowed with mind and self as the product, rather than the creator, of society. For example, Mead has noted that the self is essentially a social structure arising in social experience.[4]

> After a self has arisen, in a certain sense, it provides for itself its social experiences and we can so conceive of an absolutely solitary self. But it is impossible to conceive of a self arising outside of social experiences.[5]

Jersild, agreeing, has commented that the self includes all the ideas and feelings a person has in regard to the properties of his body, the qualities of his mind, and his personal characteristics:

> It includes his beliefs, values, and convictions . . . components of the self range from neutral details of self-perception to attitudes charged with feelings, such as pride or shame, inferiority, self-esteem or self-reproach.[6]

Essentially, to know oneself and to hold a positive image of the self--to have to strive for identity--constitutes a universal characteristic among men, according to

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[3]For excellent reviews of past literature on self, P. H. Mussen (Ed.), Handbook of Personality: Theory and Research (Chicago: Rand McNally, 1968); also Leonard Broom and Peter Selznick, Sociology: A Text of Adapted Readings (New York: Harper & Row, 1973); and Gerald E. Meyers, Self: An Introduction to Philosophical Psychology (New York: Pegasus, 1969).

[4]George H. Mead, Mind, Self, and Society (Chicago: University of Chicago Press, 1944).

[5]Ibid., p. 140.

[6]Arthur T. Jersild, The Psychology of Adolescence (New York: Macmillan, 1957), pp. 22-23.

Goldenson. This need is one with which a person lives from birth to death; it is seen as crystallizing between the ages of about four and five.

Crystallization as a process has been described. Brookover and associates have detailed the events of crystallization in these terms:[7] at about 4 or 5, a child develops the intellect, the thinking ability, and the social and verbal skills that enable him to define himself in terms of being and becoming an unsuccessful or a successful individual.

Rogers, among others, agreed that the self is a social product developing out of interpersonal relationships.[8] He noted also that, once the individual has internalized an opinion of his self, it remains comparatively constant from that time forward. Lecky has added that, once the self-concept is formed, it resists change and strives for consistency; in this way it becomes "ultra-conservative."[9] As Purkey maintained: "Individuals are generally unable to accept evidence that is contrary to the way they seem themselves; they resolve conflict between evidence and personal

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[7]William B. Brookover, S. Thomas, and A. Patterson, "Self Concept of Ability and School Achievement," Sociology of Education 37 (1964): 271-78.

[8]Carl R. Rogers, Client-Centered Therapy: Its Current Practice, Implications and Theory (Boston: Houghton-Mifflin, 1959); and Carl R. Rogers, Crisis-Centered Therapy (Boston: Houghton-Mifflin, 1951).

[9]L. Lecky, Self-Consistency: A Theory of Personality (New York: Island Press, 1945), p. 95.

judgment [thus] in favor of personal judgment . . ."[10]

Taking all such comments into consideration, one can note that one literature review was concerned with the variables of self-concept and juvenile delinquency behavior.[11] Although the authors, Tangri and Schwartz, showed that a case could be made for engaging in such research, they also showed, importantly for the purposes of this study, that research design should account not only for the self variable but also for structural and other cognitive scales in order to arrive at more sophisticated interaction patterns.

Self-Concept as a Measure of Mental Health

The literature makes it clear that recognition of the situational self has led to new perspectives on deviance, mental health, and the unity of the self. According to such new perspectives, a central feature of mental health in the contemporary culture has been seen to be a self-concept including esteem, a sense of competence, and a constructive personality.[12]

According to Erikson, who conducted a detailed study on the self and mental health, there are eight stages of

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[10]Walter W. Purkey, School Concept and Achievement (Englewood Cliffs, N.J.: Prentice-Hall, 1970), p. 40.

[11]Sandra Tangri and Michael Schwartz, "Delinquency Research and the Self-Concept Variable," Journal of Criminal Law, Criminology and Police Science, 58 (June 1967): 182-90.

[12]James F. Feldhusen, T. Denny and C. F. Condon, "Anxiety, Divergent Thinking, and Achievement," Journal of Educational Psychology 56 (1965): 40-45.

personality and development.[13] Because the individual's self-concept lies at the very core of the personality, it is therefore affected by the crisis situation that must be resolved--one way or another--when a person passes from one stage to the next. The first stage, according to the researcher, is the crisis of basic trust or mistrust. Under ordinary circumstances, a child develops his basic orientation to trust from his mother--trusting that the mother will return and provide comfort whenever needed. If the mother does, the child will learn to trust; if not, he may carry throughout his life an orientation of mistrust that is, frequently, although not always, crippling.

Individuality is asserted at the second stage. If not resolved, the child suffers shame and doubt; if the transition is psychologically successful, on the other hand, the child will gain autonomy. The crisis of assertiveness is next, according to this stage theory. If the individual can learn to channel his fantasy and rival urges, he acquires initiative; if not, he builds up a reservoir of guilt.

In the fourth stage the child must achieve learning and competence, or he will experience a sense of inferiority and failure. This crisis period usually occurs at about the time the child enters school. It is during adolescence that the next crisis stage occurs. This is an identity crisis.

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[13]Erik H. Erikson, "Youth and the Life Cycle," Children 7 (1960): 43-49; also Erik H. Erikson, Childhood and Society (New York: W. W. Norton, 1950).

The youngster at this time must resolve his identity--that is, he must decide definitely who he is and where he is going. If he does not, he will subsequently experience role confusion. It is also at this stage that the adolescent must resolve his sexual identity, choose his occupation, and plan for his adult life. Erikson has explained that it is only when the adolescent has found himself that he is capable of finding another person with whom to relate closely.

In accordance with this view, the personality of the post-adolescent is a combination of successful and non-successful crisis resolution outcomes.[14] The individual's total personality reveals a combination of attitudes that reflect the crisis experiences of both success and failure. In this context, the self-concept, as the core of the individual's personality, can serve as a sort of barometer, or measure, of either positive or negative mental health.

The literature generally agrees that the individual's self-concept is a relatively accurate indicator of the state of mental health. Low levels of self-concept and self-esteem have been correlated by various research studies with such negative entities as delinquency, deviance, maladjustment,

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[14]For recent in-depth studies detailing this view, Charles S. Hall and George Lindzey, Theories of Personality (New York: Wiley, 1970); also E. B. McNeil, The Psychology of Being Human (San Francisco: Canfield Books, 1974); and Stanley F. Spitzer, The Sociology of Personality (New York: Van Nostrand, 1969).

the use of drugs, and psychopathological behavior.[15] Other studies have correlated high levels of self-concept and self-esteem with such factors--singly or in combination--as positive achievement motivation, autonomy, competency, adjustment of various kinds to various situations, capability, and successful endeavor.[16]

The literature suggests, thus, that a positive or negative self-concept will produce significantly differential outcomes especially in the areas of academic achievement and scholastic accomplishment. The literature demonstrates, for example, that mentally healthy students will feel competent, enjoy the learning experience, be productive, and find fulfillment in group efforts.[17] Much literature also

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[15]D. A. Gawronski and C. Matthis, "Differences between Overachieving, Normal Achieving, and Under Achieving High School Students," School Psychology 2 (1965): 152-55; also Frank P. Besag, Alienation and Education: An Empirical Approach (Buffalo, N.Y.: Hertillon Press, 1966); and Robert J. Balester, "The Self-Concept and Juvenile Delinquency," (Ph.D. dissertation, Vanderbilt University, 1956).

[16]Robert Blauner, Alienation and Freedom (Chicago: University of Chicago Press, 1964); also C. J. Guardo and J. B. Bohan, "Development of a Sense of Self-Identity in Children," Child Development 42 (1971): 1909-21; and Macy A. Wyatt, "A Study of the Interaction between Personality Traits, IQ, and Achievement in Negro and White Fourth Grade Children," (Ph.D. dissertation, University of Kentucky, 1972).

[17]Robert C. Wylie, The Self Concept: A Critical Survey of Pertinent Research Literature (Lincoln, Neb.: University of Nebraska Press, 1961); also William B. Brookover, "Self-Concept of Ability and School Achievement," Sociology of Education 37 (1964): 279-91; also B. Ragor, "Mental Ability, School Achievement, and Language Arts Achievement in Prediction of Delinquency," Journal of Educational Research 64 (1970): 68-72.

documents the fact that students with low levels of self-esteem will have a tendency toward underachievement, feelings of guilt and inferiority, and alienation from the school, and society, and themselves.[18]

Formation and Stability of Self-Concept

Although the self has been conceptualized in at least eight different ways, contemporary writings have viewed the self in two principal developmental senses. The first of the two views perceives the self-concept as a set of psychological processes that govern adjustment or behavior. This view holds to the idea of the "self-as-subject."

The second perspective perceives the self in the context of "self-as-process." In other words, the self is seen as consisting of an active group of processes. These include, for example, thinking, perceiving, and remembering.

It is important to note that the changing versus the relatively stable concept of self has long been a continuing subject of controversy among researchers. Those espousing the views of Mead hold to a concept of a

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[18]Sheldon Gluek and Eleanor Gluek, Delinquents and Non-Delinquents in Perspective (Cambridge, Mass.: Harvard University Press, 1968); also Ira L. Zimmerman and George N. Allenbrand, "Personality Characteristics and Attitudes of Good and Poor Readers," Journal of Educational Resources 59 (1965): 28-39; Frank K. Heussenstamm and Richard Hoepfner, "Black, White and Brown Adolescent Alienation," Educational Leadership 6 (1972): 241-46.

relatively stable and yet somewhat situational self.[19] Those championing the other view contend that it is inappropriate to think a person has only one self-concept.[20] These theorists contend that such a view ignores relevant characterisitics. They suggest that self-concept varies from one situation to another and from one time to another in terms of sets of attributes or roles. Research has tended to seek a compromise between the two schools, recognizing both the stable and fluid aspects of the concept of self. The research literature has also recognized that, while the self-concept tends to change with time, it is nevertheless stable and highly resistant to change. Various writings have substantiated these postulations.[21]

Self-Concept and Outcome Behavior

One dimension of self-concept, according to the

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[19]Charles H. Cooley, Social Organizations (New York: Scribner & Sons, 1909); Charles H. Cooley, Human Nature and the Social Order (New York: Schocken Books, 1954); also William McDougall, Body and Mind (New York: Barnes & Noble, 1960); and P. J. Jeine, Personality in Social Theory (Chicago: Aldine, 1970).

[20]William B. Brookover and Erik L. Erikson, Society, Schools, and Learning (Boston: Allyn & Bacon, 1969); also W. E. Arnot, Theories of Personality (New York: Macmillan, 1974); and Eric Berne, Games People Play (New York: Grove Press, 1964.

[21]Chris Argyris, Personality and Organization (New York: Harper & Row, 1957); David W. Johnson, Contemporary Social Psychology (Philadelphia: Lippincott, 1973); J. P. Robinson and P. R. Shaver, Measures of Social and Psychological Attitudes (Ann Arbor, Mich.: Institute for Social Research, 1968); and William H. Fitts and Charles Ashcraft, "Self-Concept Change in Psychotherapy," Psychotherapy 1 (1964): 115-19.

literature, is that it acts as an intervening variable with regard to the individual's outcome behavior. A good example of this can be seen in the student whose academic performance and achievement are considerably below his ability level. The positive or negative level of one's self-concept appears to have a significant influence on that individual's outcome behavior in terms of academic accomplishment and achievement.

> Underachieving can begin at any time, but most frequently has its start in elementary school. The child ceases to do his work either because his parents show an indifferent attitude . . . or because they demand so much he becomes discouraged. . . . Underachievement has important effects on the child . . . many feel guilty and ashamed and as a result isolate themselves. . . . Attitudes of this kind can do permanent damage to the personality. .[22]

Other research studies support this view. They note further that overachieving also relates significantly to low self-concept levels. Frankel, for one, detailed reasons for this phenomenon, pointing out that many overachievers are inwardly hostile toward parents and the school.[23] According to Shaw and Grubb, such children overachieve not because they are interested in their academic work, nor because they have a very strong motive to achieve; rather, they overachieve because they fear failure, or want to prove that they are adequate for one reason or another.[24] Underachievement and

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[22]Goldenson, Encyclopedia of Human Behavior, pp. 1345-46.

[23]E. Frankel, "A Comparative Study of Achieving and Underachieving High School Boys of High Intellectual Ability," Journal of Educational Research 53 (1960): 172-80.

[24]M. C. Shaw and J. Grubb, "Hostility and Able High School Underachievers," Journal of Counseling Psychology 5 (1958): 263-67.

overachievement are both viewed as problems in this context. Both are related to the child's concept of himself, and one may be, or become, as much a problem as the other.

Self-concept acts, expectably, as an intervening variable to influence other outcome behaviors besides the academic. Combinations and groups of intervening variables, and their relationship to stabilization of self-concept have been examined in recent research. For example, Nicolaou's study examined the importance of the relationship between a child's self-concept, various psychosocial variables, and mental health.[25] A study conducted by Barcaski sought to find relationships between self-concept, cognitive factors, motivational variables, and teaching methods in the academic environment.[26]

A comparative analysis was undertaken by Douglas in a study focused on the relationships between self-esteem, self-concept, and various factors characterizing children from diverse racial groups.[27] The purpose of the investigation was, first, to compare pupil attitudes toward school,

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[25]Abraham W. Nicolaou, "The Relation of Self-Concept and Frustration to Aggression in Emotionally Disturbed and Normal Children Placed in Special and Regular Programs," (Ph.D. dissertation, University of Michigan, 1969).

[26]Peter B. Barcaski, "Cognitive and Motivational Factors, Methods, of Teaching, and Their Effects on Achievement, Transfer, and Retention of Pre-Sequenced Self-Concepts," (Ph.D. dissertation, Columbia University, 1969).

[27]Douglas, "A Comparative Analysis of Relationships between Self-Esteem and Certain Selected Variables Among Youth from Diverse Racial Groups."

parents, family, peers, and teachers, for one; second, the goal was to determine the nature and distribution of negative self-concepts among children from inner-city environments. The study found no significant differences between white and black pupils in such areas.

Many studies have examined the relationships among parents, immediate family members, and children as regards stabilization and formation of children's self-concepts. Stephens' research has aptly summed up the influence of a variety of influences.[28] The study documented a number of factors and pointed out that they act in a variety of ways, thus serving as direct influences on a child's self-concept development. In addition, the study noted that these forces set up other internal conditions along with the direct effect. The conditions also play a crucial part in the development of the self-concept. The study concluded that self-concept development, like the development of other personality components, is influenced by a multitude of social, biological, environment, and heredity factors. These include age of stabilization, disease, metabolic conditions, social class, socioeconomic variables, ethnic characteristics, and biological factors.

The Literature on Causal Factors of Juvenile Delinquency

Single factors and combinations of unrelated

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[28]John M. Stephens, The Psychology of Classroom Learning (New York: Holt, Rinehart, and Winston, 1966).

variables as related to the phenomenon of delinquency among juveniles has been the subject of extensive investigation, especially in the past two decades. One reason has been the contention that juvenile delinquency has risen at an alarming rate.

Considering theory first, it has been noted that social deviance theories can be grouped in several ways. The three major types of theories appear to be: (1) strain (or psychological) theory which holds that when conformity to conventional behavior fails to achieve personal ends, deviant behavior ensues; (2) cultural deviance (or anthropological) theory, which holds that the individual's deviance from the "main culture" results from conformity in values and behaviors to a deviant "subculture;" and (3) control (or sociological) theory, which states that when the "social bonds" holding the individual accountable to conventional morality weaken, he chooses the ends and means only of his own interests.[29] Essentially the

> voluminous, speculative, clinical, and research literature on deviance from the law, that is, delinquency and crime, reveals a propensity of authors to espouse a conceptual stance, to study empirical indicators of its particular theoretical constructs, and to find at least some confirmation of the theory.[30]

Relationships among apparently contributory factors

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[29]Travis Hirschi, Causes of Delinquency (Berkeley: University of California Press, 1969).

[30]Herbert J. Walberg, "Urban Schooling and Delinquency: Toward an Integrative Theory," American Educational Research Journal, 9 2(Spring 1972): 286.

have been studied in some depth. Elenburg, for example, examined the relationship between intelligence and delinquency.[31] In this investigation of boys in a juvenile home, the study found that 39 percent had normal or above normal intelligence. However, only 10 percent were functioning at a normal level as regards academic achievement. Ferguson's survey of boys leaving school at a very early age produced the finding that poor scholastic performance was significantly associated with the possibility of ultimately violating a law and being convicted.[32] According to the study, 10 percent of those leaving school with the lowest scholastic achievement ratings had a chance of being convicted of some crime before the age of eighteen; they were also five times more apt to be convicted than boys with higher scholastic achievement records.

Differential perceptions of delinquent behavior were examined by Davies.[33] The investigation of the relationships of delinquency to the evaluation of misbehavior assumed that a change in the self-image resulted from self or community labeling as a delinquent; the changed self-image resulted in a different evaluative perception of misbehavior on the part

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[31]M. D. Elenburg, "Remand Home Boys: 1930-1955," British Journal of Criminology 2 (1961): 111-12.

[32]Thomas Ferguson, The Young Delinquent in His Social Setting (New York: Oxford Press, 1952).

[33]John F. Davies, "Differential Perceptions of Delinquent Behavior," Dissertation Abstracts International, 31 (1970): 841-A.

of the delinquent youngster. The findings of the study indicated that delinquent adolescents defined misbehavior as less serious than non-delinquent youngsters.

Family dynamics and juvenile delinquency were the subjects of concern in Allen's study.[34] The study pointed out that the literature on the family suggested that faulty family dynamics may well be a cause of serious emotional problems for the individual members; yet the literature failed to emphasize the role of defective family relationships on deviant behavior and delinquency. The study hypothesized that juvenile delinquents from supportive homes would make significantly greater rehabiltation progress than delinquents from non-supportive homes. The criterion of "progress" was thus correlated with family "supportiveness." The investigation found statistically significant correlations.

In this respect, however, it has recently been shown that the broken home is not an insignificant variable and it should be considered an open-ended empirical question as regards the totality of acts of juvenile delinquency.[35]

Although Deitz's study focused on a comparison of delinquents and non-delinquents with regard to self-concept,

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[34]Muriel H. Allen, "Family Dynamics in the Rehabilitation of Delinquent Male Youths," (Ph.D. dissertation, Boston University School of Education, 1969).

[35]Karen Wilkinson, "The Broken Family and Juvenile Delinquency: Scientific Explanation or Ideology?" Social Problems, 21 5(January 1974): 726-39.

self-acceptance, and parental identification, the major concern of the study related to one variable: family relationships.[36] The study's position was that "delinquents are partly the byproducts of disturbed family relationships and that they act out their frustrations against society."[37]

The Deitz investigation found, among other things, that while juvenile delinquents had lower self-concepts, they identified less closely with their parents--particularly the fathers--as compared to non-delinquents. According to the study, the results implied that "delinquents, because of disturbed relationships with their parents, are self-dissatisfied and project self-rejection and rejection of others through the medium of aggressive behavior."[38]

Thus, although self-concept is only one of the many variables believed significantly to influence delinquent behavior in adolescents, it has been generally considered a factor of major importance. A study by Reckless and his coworkers, for example, emphasized the implications and far-reaching effects of self-concept as regards potential influence on delinquent behavior.[39] The study suggested that a

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[36]George F. Deitz, "Comparison of Delinquents with Nondelinquents on Self-Concept, Self-Acceptance, and Parental Identification," Journal of Genetic Psychology, 115 (1969).

[37]Ibid., p. 285 [38]Ibid., p. 294.

[39]Walter C. Reckless, et al., "The Self Component in Potential Delinquents," American Social Review, 22 (1957): 570.

positive self-image was a variable that appeared to be effective as a means of insulating young boys against delinquency, or, conversely, of enhancing their vulnerability. "It is proposed that socially appropriate or inappropriate concepts of self and others is the basic component that steers the youthful person away or towards delinquency."[40]

A wide variety of self-concept tests have been used by researchers for the purpose of collecting data for assessment of the relationships between self-concept and delinquency. This is especially true of the past two decades. Although many tests have been criticized, and many have been questioned as regards their validity and reliability, authorities have agreed generally that they reveal important characteristics of the self. Thus the tests are useful to research investigations and particularly to workers in the helping professions. As research tools they have been used to study both the nature of personality and specific components of personality, such as self-concept. As clinical tools they have been used in assessing individuals who may need therapeutic help. Most emphasize the uniqueness of the individual.

A number of tests have been developed to ascertain and define the individual's concept of himself. One device has been the adjective checklist.[41] Such a test requires the

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[40] Ibid., p. 570.

[41] Charles E. Osgood, "The Nature and Measurement of Meaning," Psychological Bulletin 49 (1952): 197-237; also

respondent to check all items that apply to himself from lists of adjectives. The results are then analyzed and compared with findings on more indirect personality tests. A second procedure has been to interpret personality inventory responses on such tests as the Minnesota Multiphasic Personality Inventory (MMPI) in terms of self-conceptualization.[42]

Perhaps the most important of such means of measuring self-concept has been the semantic differential scales, which grew out of attempts to develop an objective way to measure concept meanings. The scales themselves consist of pairs of antipodal adjectives instead of sentences. Adjectives were placed at the ends of a seven-degree sliding continuum. The adjectives, or scales, were then related to the concept by each individual respondent. The direction in which one's attitude tended was determined by the adjectives that had been selected.

The semantic differential scale has been found to be a reliable and valid means of measuring attitudes--and, thus, self-concept.[43] Short and Nye used the semantic

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Norman R. F. Maier, Psychology in Industry (Boston: Houghton Mifflin, 1965), pp. 62-71; and William A. Kerr and F. W. Dunbar, Theory and Problems in Industrial Psychology (Bridgeport, Ill.: William James Press, 1966), pp. 117-21.

[42]Arthur J. Lein, Measurement and Evaluation of Learning (Dubuque, Ia.: W. C. Brown, 1971), p. 155.

[43]Kenneth Carroll, "Review of the Semantic Differential," Language 25 (1959): 76-77; also F. G. Masters and J. E. Tona, "The Semantic Differential Test with Borstal Subjects," British Journal of Criminology 8 (1968): 20-31; and Edward E. McDowell, "Semantic Differential as a Method of Evaluation," Journal of Educational Research 68 (May 1975): 330-33.

differential test in their investigation to ascertain the extent of unrecorded delinquency.[44] The researchers tested adolescents in various environments. The test results revealed that many of the adolescents were clearly delinquents but because they had not yet been convicted of a crime, they were not included in reported delinquency statistics. The investigation concluded that delinquent gang members tended to record significantly more negative ratings of self than did non-delinquent adolescents from similar environments.

How multiple factors operate in conjunction to cause juvenile delinquency has been studied by many researchers. However, most studies on clusters of variables have not attempted to identify a specific set or pattern of factors; rather, most research has grouped various unrelated variables and examined their relationship--either singly or together--to juvenile delinquency. Frease's study, for example, focused on the schools, self-concept, and delinquency.[45] These variables were examined separately:

> Specifically, we will investigate, first, the association between academic performance and self-identification as a student. Secondly, we will analyze the relationship between self-identification as a student and delinquent friendship patterns. Finally, the

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[44] J. F. Short and F. L. Nye, "The Extent of Unrecorded Juvenile Delinquency: Tentative Conclusions," Journal of Criminology and Police Science 49 (1958): 296-302.

[45] Dean E. Frease, "The Schools, Self-Concept, and Juvenile Delinquency," British Journal of Criminology 12 (1972): 133-46.

issue of the correlation between delinquent friendship-acquaintenance patterns and actual illegal behavior is examined.[46]

A study conducted by Burke and Simons was one of the few found in the literature that attempted to examine a set, cluster, or pattern of variables related to juvenile delinquency.[47] The purpose of this in-depth study was to isolate a group of educational experiences common to the inmate population of a youth center and to determine their relevance to the delinquency, dropout, and crime problems. A cluster of educational experiences was sought, subsequently, that would be common to a significant number of delinquents at the center. These experiences were postulated as causes, not merely of delinquency, but of dropping out, deviant behavior, and eventual incarceration. Data were collected from case histories and educational interview sheets, and through administration of two questionnaires. Analysis of the data provided a listing of those elements that comprised the types of syndromes relating to delinquency and other problems. Included were: poor school adjustment, poor reading skills, language deficiencies, early dropping out, truancy, and retardation.

The implications of the findings were detailed by

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[46] Ibid., p. 133.

[47] Norman S. Burke and Allen E. Simons, The Probable Syndrome in Terms of Educational Experiences which Precipitate Dropouts, Delinquency, and Eventual Incarceration (Washington, D.C.: Institute for Criminological Research, 1964).

the study. Those related to school included pre-school education, adaptive curriculum materials, professional counseling with understanding of slum culture, and in-service teacher training.

Selected social, developmental, and behavioral criteria were compared in another study.[48] In this research, Wax attempted to determine whether differences existed between similar groups of black and white preadolescent delinquents on selected common variables. The study assumed that differences would occur in respect to such variables as family intactness, school achievement, intelligence, good health, type of offense, personality characteristics, and self-concept. The assumptions derived from the theoretical and empirical literature.

Additional data for the study were obtained from the subjects' court records and case histories. Data analysis suggested that the two groups did not differ significantly on the variables examined. From the analysis, the study concluded that the phenomenon of male preadolescent delinquency, as well as the associated variables related directly and significantly to the lower socioeconomic class "culture of poverty" rather than to racial or ethnic group membership.

In sum, the literature on the causes of juvenile

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[48]Douglas E. Wax, "A Comparison of Negro and Caucasian Male Preadolescent Delinquents on Selected Social, Developmental, and Behavioral Criteria," (Ph.D. dissertation, Boston College, 1969).

delinquency tends toward agreement with Stinchcombe.[49] As his study tried to show, one of the more interesting questions that may appear was the problem of how people learn what is appropriate for adolescents and what it means to be an adult. As others have also concluded, human behavior is determined by both normative (or sociological) and personal (or psychological) factors, and these arise out of a cultural (anthropological) context.

In the institution of the school as well as in the matter of the individual, both types of factors are embedded in the culture. The institution, for example, becomes increasingly bureaucratized and activities like screening are bureaucratically controlled. In addition, data concerning the context of delinquent acts is relevant to resolving basic questions regarding the extent to which juvenile delinquency is a group phenomenon. It has been suggested, for example, that the importance of "peer group" support in the commission of offenses has eroded over the last few decades.[50]

Thus the literature on the general connection between social impact and delinquent behavior has proven to be an increasingly important research area.

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[49]Arthur L. Stinchcombe, Rebellion in a High School (Chicago: Quadrangle Books, 1964), pp. 182-83.

[50]Maynard L. Erickson, "The Group Context of Delinquent Behavior," Social Problems 19 (Summer 1971): 125-26; and Walberg, "Urban Schooling," pp. 286-87.

Literature on Anxiety, School Achievement, and Juvenile Delinquency

The available literature has strongly suggested that stress and frustration impair the physical and intellectual performance of many individuals in the areas of complex problem solving and physical skills. It has been noted that frustration impairs performance because it forces a person to employ self-defensive measures; these interfere with performance.[51] Several studies have compared the learning effectiveness of children who differed as regards levels of anxiety, for example.[52] Anxiety was measured either by observing its manifestations in behavior or by inventorying its symptoms in the feelings and attitudes of children. Anxiety would more normally be self-inventoried.

McGinnis' study pointed out that avoidance of learning tasks as a result of anxiety takes various forms. Some children alleviate anxiety by denying either inadequacy or the threats in their environment. Anxious children who

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[51]Victor I. Douglas, "Children's Responses to Frustration: A Developmental Study," Canadian Journal of Psychology 19 (1965): 161-71; also E. D. Keller and V. N. Rowley, "Anxiety, Intelligence, and Scholastic Achievement in School Children," Psychological Reports 11 (1962): 19-22; also P. G. Zimbardo, et al., "The Role of Anxiety in Defensiveness in Children's Verbal Behavior," Journal of Personality 41 (1973): 79-96.

[52]I. Bailer, "Conceptualization of Success and Failure in Mentally Retarded and Normal Children," Journal of Personality 29 (1961): 303-20; also Stephan B. Sarason, Anxiety in Elementary School Children (New York: John Wiley, 1960); and Homer W. Reese, "Manifest Anxiety and Achievement Test Performance," Journal of Educational Psychology 51 (1961): 132-35.

deny their difficulties and deficiencies readily abandon systematic problem solving for feigned solutions. Eventually this process causes school failure and underachievement, and thus may lead to delinquency. Stinchcombe agrees with this conclusion. His study attempted to show that social-structural, cultural, and psychological sub-systems relate to the student's rejection of the school's social world and consequently, to student rebellion.[53]

Children with reading difficulties have been found to undervalue themselves because of reading problems, because reading in American culture is essentially a developmental task; "failure in our culture is an essentially developmental task. Failure in reading can block the child's attempt to satisfy this need for self-esteem . . ."[54]

Black's study documented a basic relationship between retardation in reading and a low self-concept--yet another factor to be considered in appraising the relationship between school underachievement and juvenile delinquency.[55] Black concluded that, "as children tend to view their personal worth and adequacy in part by the adequacy of their school performance, an effort should be made to deal with

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[53]Stinchcombe, Rebellion in a High School.

[54]Howard P. Smith and E. Dechant, Psychology in Teaching Reading (Englewood Cliffs, N.J.: Prentice-Hall, 1961), p. 297.

[55]William Black, "Self-Concept as Related to Achievement and Age in Learning of Disabled Children," Child Development 45 (1974): 1137-40.

both the learning problem and problems in self-concept in remedial programs."

Other studies have also noted the significant relationship between poor reading ability and feelings of personal worth and value.[56] Substantial research has indicated, thus, that low-achievement students not only perceive themselves as less able and less self-reliant in comparison with achieving pupils, but also develop a negative self-image--one that has serious consequences for future learning and achievement. Thus a ranking at the positive or negative end of the self-concept dimension of personality appears to make a significant difference in students' performances. Because effective learning in the academic setting requires sustained intellectual efficiency, maladjusted students underachieve. Their fears and defenses divert them from efficient use of their skills. Failing to achieve scholastic competence, maladjusted children come to feel inferior, guilty, and anxious--they become dominated by anxiety. Lewis and Adank, in a recent study, have noted that underachieving children with high levels of anxiety attempt to shield the inadequacies that they feel; to allay anxiety they learn such self-defenses as rebellion, denial, overdependence, excuse-making, avoidance of challenges, and other related

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[56]Zimmerman and Allenbrand, "Personality Characteristics," pp. 28-30; and Sarason, Anxiety in Elementary School Children; see also Donald McGinnis, "A Point of View Concerning Anxiety and Its Relationship to Reading Achievement," Reading Horizons 2 (1961): 16-24.

measures.[57]

It can be concluded that limited scholastic achievement tends to lower the child's perception of self; self-esteem suffers, and underachievement becomes significantly related to high levels of frustration and anxiety. Delinquents also tend to have a poor self-concept and to achieve inadequately in school. It would seem, thus, that limited success in school can lead to delinquency and that anxiety figures strongly in scholastic achievement.

Finally, other aspects of the variables discussed in this study can be connected through the research literature. The purpose is to show how a pattern of association between delinquency and its concomitants constitutes a valuable research methodology.

It should be noted that the impact of the bureaucratized school becomes important when it is noted that the extent to which schools draw up reports about delinquent behavior makes such behavior more visible than similar acts committed by males out of school. Thus, the rate of delinquency referral for boys in school is greater than that for those out of school.[58]

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[57]John Lewis and Richard Adank, "Intercorrelations among Measures of Intelligence, Achievement, Self-Esteem, and Anxiety in Two Groups of Elementary School Children," Educational and Psychological Measurement 35 (1975): 497-501.

[58]Delbert S. Elliott, "Delinquency, School Attendance and Dropout," Social Problems 13, 3(Winter 1966): 307-12.

In this respect, Walberg attempted to show that actual questionnaires in school use depend on background characteristics, attitudes, perceptions, and behaviors suggested by the larger socio-psychological framework in which the school and the individual find themselves. A further questionnaire was devised from these other forms and reports in an attempt to identify patterns of delinquency associated with school attitude and behavior as well as specific aspects of each of these subcultures.[59]

Rafky, by contrast, noted that school rebellion is not a response to school per se. But this also means that the school should not necessarily be viewed as an instrument for delinquency control.[60]

Rafky also undertook a quasi-replication of Stinchcombe's study for the purpose of critiquing the latter's research design and conclusions. It was noted that Stinchcombe's findings were limited due to the selection of a biased target population. But Stinchcombe had recognized this factor, attributing it to the exploratory nature of the investigation.[61]

Finally, Rafky and Sealey have reported on more than 1,000 urban high school students who responded to a questionnaire that assessed contact with the law, attitudes toward

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[59]Walberg, "Urban Schooling."

[60]David M. Rafky, "School Rebellion: A Research Note," undated mimeograph.

[61]Rafky, "School Rebellion," and Stinchcombe, Rebellion in a High School, p. 189.

the law, and knowledge of the law. The survey showed that "legal knowledge" is not an "all or none" phenomenon. Students tend to know some things about the law and to remain ignorant about others. Legal knowledge was deemed independent of response for the law and disruptive behavior. A major implication here was that legal education in schools should not concentrate exclusively on the cognitive aspects of such education. The affective and behavioral needs of students should also be addressed.[62]

Thus a major conclusion from the review of the literature appears to be that replications and research designs are needed as means of facilitating conclusions on the relationship between schooling and the juvenile justice system--and, perhaps, other social institutions.[63]

Summary

The present chapter has reviewed the literature pertinent to the subject of the investigation: the relationship of such variables as school failure, school attitudes, and self-concept to juvenile delinquency.

The literature on self, self-concept, and self-concept formation was examined first. The term "self" was defined as the composite of thoughts and feelings that constitute an individual's awareness of his existence. It was

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[62]David M. Rafky and Ronald W. Sealey, "The Adolescent and the Law: A Survey," Crime and Delinquency, 21, 2 (April 1975): 131-38.

[63]Walberg, "Urban Schooling."

pointed out that the individual's self includes the conception of who he is and his own evaluation of his characteristics, skills, abilities, qualities, and properties. It was also noted that the self is situational, a social product developing out of interpersonal relationships in society. Self-concept was seen as a relatively accurate indicator of one's state of mental health: low levels of self-concept and self-esteem have been correlated with negative entities such as delinquency, deviance, maladjustment, and psychopathological behavior.

The causes and combinational factors related to the problem of juvenile delinquency provided the subject of the next literature review section. Single factors such as family dynamics, differential perceptions of delinquent behavior, self-concept, group affiliation, and academic achievement were noted to have significant influence on potential delinquency. The literature generally agreed that self-concept tests reveal characteristics of the self that are useful to researchers and workers in the helping professions. Various types of tests developed for the purpose of measuring self-concept were discussed. The semantic differential was singled out by the literature, however, as being superior to most others.

Combinations of factors were also reviewed as they related to the phenomenon of delinquency. It was noted, however, that most studies encompassing more than one variable made no attempt to cluster, or group, the factors according

to a pattern. But such research was seen as needed.

The final section of the chapter was concerned with anxiety as related to school attitudes, academic achievement, and juvenile delinquency. The underlying motivation of defensive responses to frustration in children was found to be anxiety; anxiety has a profound effect on academic achievement, school attitudes, and, eventually, on potential delinquent behavior. From the literature review it was concluded that limited scholastic achievement tends to lower students' self-esteem and perceptions of self and that underachievement is significantly related to high frustration levels and anxiety. Because juvenile delinquents tend to havepoor self-concepts and poor school achievement, anxiety was correlated with delinquency. Anxiety was seen as bringing about distorted perceptions of a student's situation, of himself, and of the consequences of his own behavior; the result, often, was development of defense mechanisms such as rebellion, overdependence, or excuse-making, all of which produce a maladjusted student. Such a student appears to be significantly more apt to become a delinquent before or during adolescence.

CHAPTER III

METHODS AND PROCEDURES

As a basis for establishing testing methods and procedures, the study was limited to the geographical boundaries of two specific towns in British Columbia, Canada, and to male secondary school students from three schools. The latter limitation appeared justified in view of the fact that most delinquency may be attributed to male students.

The Sample

The study's sample population derived from three schools: Travalgar Secondary School and School District No. 7 in Nelson, B.C., Canada, and Vancouver Island Youth Center in Nanimo, B.C., Canada. Non-delinquents, Group 1, were selected randomly from the 300 boys attending ninth and tenth grades at the first of these schools. They represented the control group of the investigation. Probationary delinquents, Group 2, were randomly selected from the total school population of approximately 250 males attending the second school. They comprised the first experimental group. The second experimental group, Group 3, consisted of delinquents randomly selected from a total adolescent population of 175 delinquents serving periods of detention at

Vancouver Island Youth Center.

The total sample population was to be 150 subjects, 50 randomly selected from each of the three schools. However, it was only possible to obtain 40 students from the Vancouver Island Youth Center. Because the statistical methodology of the study called for analysis of groups of equal size, Groups 1 and 2 were randomly reduced to 40 subjects each. In sum, a total of 120 male subjects comprised the study's sample, with 40 students representing each school. Selection was carried out by noting names of potential subjects in random order on complete lists of school enrollees and then contacting students for their agreement to participate.

Test Instruments

The materials used in the study included school records and a variety of test instruments whose validity and reliability have been proven through widespread use and analysis. In order to gather data on intelligence, achievement, reading, and self-esteem, the following test instruments were employed: the Lorge-Thorndike Intelligence Test (LTIT), the Gates-MacGinitie Diagnostic Reading Test (GMRT), the Rosenberg Self-Esteem Scale, the Hunt Low Self-Esteem Scale, and the Body Cathexis Scale. In order to gather data regarding anxiety levels and attitudes toward school, the following instruments were used: Taylor's Manifest Anxiety Scale (TMAS), and the Reckless-Dintz Scale (RDS).

The Lorge-Thorndike Intelligence Test, 35 minutes in length, was designed to select children for special guidance and placement. However, the use of older intelligence tests such as the 1937 revision of the Stanford-Binet often resulted in means and standard deviations ranging greatly at each age level. Such means and standard deviations made interpretation difficult. Given that the grade level at which a person is functioning on an intelligence test is called his mental age grade placement (MAGP), it was deemed essential that the limitations inherent in mental age norms modify the traditional intelligence quotient (I.Q.). This led to the development of deviation I.Q.s; the Lorge-Thorndike instrument was found appropriate in this endeavor.

Deviation I.Q.s constitute standard scores that yield a constant mean and standard deviation. The mean on all deviation I.Q. scales is 100. Thus the LTIT shows how age, grade, and deviation I.Q. norms relate to various raw scores. For example, the LTIT for 14-year-olds shows that a raw score of 26 corresponds to a mental age (MA) of 14-0, a mental age grade placement of 8.6, and a deviation I.Q. of 100.[1]

Mainly for reasons of reliability, the Gates-MacGinitie Diagnostic Reading Test (1965) has replaced the earlier Gates Reading Tests in much school testing. For the

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[1]Gilbert Sax, Principles of Educational Measurement and Evaluation (Belmont, Cal.: Wadsworth Publishing Co., 1974), pp. 310-11, 510.

purposes of this study, Surveys E (Grades 7-9) and Survey F (Grades 10-12) were found to be most appropriate. The three surveys, made up of three and two forms respectively, provided scores reflecting speed and accuracy as well as vocabulary and comprehension skills. Testing time varied from 40 to 50 minutes; the test could be administered in either one or two sessions.

The survey tests were designed to measure how rapidly the student can read with understanding. Few students will be able to complete all paragraphs. Admittedly, survey attempts to span two to three grades can create difficulty in control items so that they are neither too easy for upper-level students nor too difficult for lower-level students. The GMRT test results, however, show a marked improvement over the older Gates Reading Test. Their further importance lay in the fact that raw scores could be converted into grade scores, standard scores, or percentiles. This is important in analysis of variance.[2]

The Rosenberg Self-Esteem Scale, the Hunt Low Self-Esteem Scale, and the Body Cathexis Scale are tests that fall within a class of instruments referred to as self-report scales or assessments. Since personality can be measured in a variety of ways, the many self-report tests that have been designed attempt to classify specific aspects of personality or behavior.

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[2]William A. Mehrens and Irvin J. Lehman, Standardized Tests in Education, 2nd ed. (New York: Holt, Rinehart and Winston, 1973), pp. 194-96.

In the present study, interest focused on assessment of certain criteria that apply to a group--delinquents--and their self-esteem ratings. Each of these tests required little time to administer and was easy to score. The admitted unreliability in any one test was largely overcome, in this study, by the use of the three tests as checks against one another.[3]

The Taylor Manifest Anxiety Scale (TMAS) is also of the self-report variety. This test is concerned with the anxiety aspect of personality. Items from the scale were taken directly from the more complex and more widely used Minnesota Multiphasic Personality Inventory (MMPI). The MMPI, however, was not designed for routine screening in elementary and secondary schools.[4]

Administration of Tests

The achievement and intelligence tests were administered to the non-delinquents and probationary delinquents by the school counselors as part of the normal school testing program. The tests were administered at the schools.

The self-esteem, anxiety, and attitude to school tests were administered to the non-delinquents and probationary delinquents by the experimenter.

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[3]Sax, Principles of Educational Measurement, pp. 455-57, 490-91; and Mehrens and Lehman, Standardized Tests, p. 281.

[4]Sax, Principles of Educational Measurement, pp. 456-57.

All testing was completed by the experimenter over a three-week period. It seemed necessary to proceed in this way since many subjects could have finished their sentences and returned home if a longer time had been projected. The test administration schedule was as follows:

First week--Administer I.Q. test and reading test

Second week--Administer achievement test

Third week--Administer self-esteem test, anxiety test, and attitude to school test

Statistical Methodology

Differences among the three groups on some test instrument scores were examined for statistical significance by analysis of variance (ANOVA) after scores were grouped into one of five categories: intelligence, academic achievement and failure, self-concept, attitudes toward school, and anxiety. Analysis of variance is an arithmetical device for partitioning the total variation in a set of data according to the various sources of variation that are present.

Total variation in the data is measured by the sum of squares of deviations from the overall mean. There are two sources of variation, the first of which is the differences among the group means. It is measured by the sum of squares of the deviation of the group means from the overall mean. The second source of variation is differences among the observations within groups, the variation of the individual values about their group means. This is measured by the pooled sum of squares of deviations of the individual

observations from the group means.

The research data were statistically analyzed by performing t and F tests where F represented the ratio of mean squares among and within groups. Computed t and F values were compared with tabular values according to the appropriate degrees of freedom for each case, using the formula: df = n - 1. Degrees of freedom may be defined as the number of squares minus the number of independent linear restrictions imposed upon the quantities involved.[5] It is not necessary to have an in-depth understanding of the term. It is only necessary to know that degrees of freedom is a mathematical concept which refers to the number of restrictions placed on the data, or the freedom left when restrictions are imposed.[6]

Summary

Male students between the ages of 14 and 16 attending three schools in two towns in British Columbia made up the sample population of the study. A total of 120 subjects comprised the study's total sample; 40 students were randomly selected from each of the three schools. Test materials supplemented school records; seven tests were used to gather data on achievement and self-concept. Six subscales of one test provided data on attitudes toward school.

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[5]Fred Kerlinger, Foundations of Behavioral Research (New York: Holt, Rinehart, and Winston, 1973), p. 168.

[6]Henry E. Garrett, Elementary Statistics (New York: Longmans, Green, and Co., 1956), p. 95.

Another instrument and scale were employed to gather data on anxiety levels.

Certain differences within and among sample groups in regard to achievement, self-concept, attitude toward school, and anxiety level were examined after tabulations by the analysis of variance technique. Data were statistically analyzed by performing *t* and *F* tests, then comparing computed values to tabled values for the appropriate degrees of freedom.

CHAPTER IV

PRESENTATION AND ANALYSIS OF THE DATA

The purpose of this portion of the investigation is to present and analyze statistically the data gathered from records and through administration of a variety of test instruments. Information gathered from the Lorge-Thorndike Intelligence Test (LTIT) provided data on intelligence in the form of I.Q. scores. The Gates-MacGinitie Diagnostic Reading Test (GMRT) supplied data on reading achievement. Self-concept information was obtained from four test instruments: the Body Cathexis (BC) and Self-Cathexis (SC) scales, the Rosenberg Self-Esteem Scale (RSE), and the Hunt, Singer, and Cobb Low Self-Esteem Test (HLSE). Six subscales of the Reckless-Dintz Test (RD) provided data on attitudes toward school. Anxiety level information was derived through administration of Taylor's Manifest Anxiety Scale (TMAS) and the Lie Scale Index contained in the TMAS instrument.

Separate statistical analyses were required for assessing differences among sample population groups for each of four major variables--academic achievement and failure, self-concept, school attitudes, and anxiety--and for one specific combination of variables in order to test the study's eight hypotheses. The data presentation and

analysis have thus been divided into separate sections according to the type of information desired. Important findings are noted in a final summary section.

Analysis of Academic Achievement and Failure

As noted, the GMRT instrument provided academic accomplishment data in terms of reading achievement scores. The test is composed of four subscales: Speed Attempted Right, Accuracy Attempted Right, Vocabulary, and Comprehension. Table 1 provides mean average scores for the study's three student groups on each of the four GMRT subscales. A mean average score for the total test battery is included for each group.

TABLE 1

MEAN AVERAGE SCORES FOR THREE SAMPLE GROUPS ON FOUR GMRT SUBSCALES

Subscale	Group 1 (Non-Del.) N = 40	Group 2 (Prob. Del.) N = 38*	Group 3 (Del.) N = 40
(1) Speed Attempted Right	50.7	43.3	28.4
(2) Accuracy Attempted Right	53.7	32.6	21.6
(3) Vocabulary	50.3	34.8	25.6
(4) Comprehension	47.7	24.0	15.3
Total Test Mean Average	50.6	33.7	22.7

*Reading test scores could not be obtained for two probationary-delinquent subjects.

The computations necessary for t testing with regard to reading achievement scores for three separate group comparisons are presented in Table 2. Testing was undertaken to determine whether there were differences between Groups 1 and 2, 1 and 3, and 2 and 3. The derived t value in each case is included. Significance was tested at the .05 level of critical probability for all derived t values for the appropriate degrees of freedom. An asterisk identifies any t value found to be significant according to tabulated values.

School records produced the data on academic failure. Failure was operationally defined in terms of number of grades repeated. Table 3 provides values computed for t with regard to academic failure for three group comparisons. Again, analysis sought to determine significant differences between Groups 1 and 2, Groups 1 and 3, and Group 2 versus 3. The computations needed for t testing are included. Significant values are identified by an asterisk.

As indicated in all the tabulations, reading achievement for Group 1 students was significantly higher as compared to the other two study groups. Mean average scores on all four GMRT subscales were significantly higher for Group 1 subjects, in fact, than for students in Groups 2 and 3. In sum, the reading achievement of non-delinquent students was significantly higher as compared to probationary-delinquent and delinquent subjects; the reading achievement of probationary delinquents, in turn, was significantly

TABLE 2

t-TEST COMPUTATIONS FROM TOTAL GMRT SCORES: THREE GROUP COMPARISONS

Group 1 (X)	Group 3 (Z)	t Value
$N = 40$	$N = 40$	4.81*
$\overline{X} = 50.6$	$\overline{Z} = 22.7$	
$SS_1 = 90,086$	$SS_2 = 24,720$	
$df = 78$		
Group 2 (Y)	**Group 3 (Z)**	**t Value**
$N = 38$	$N = 40$	1.68*
$\overline{Y} = 33.7$	$\overline{Z} = 22.7$	
$SS_1 = 60,150$	$SS_2 = 24,720$	
$df = 76$		
Group 1 (X)	**Group 2 (Y)**	**t Value**
$N = 40$	$N = 38$	1.81*
$\overline{X} = 50.6$	$\overline{Y} = 33.7$	
$SS_1 = 90,086$	$SS_2 = 60,150$	
$df = 76$		

*$p < .05$.

TABLE 3

t-TEST COMPUTATIONS FROM ACADEMIC FAILURE (GRADES REPEATED) SCORES: THREE GROUP COMPARISONS

Group 1 (X)	Group 3 (Z)	t Value
N = 3	N = 27	14.66*
ΣG.R. = 3	ΣG.R. = 38	
ΣG.R.^{2} = 5	ΣG.R.^{2} = 60	
$\bar{X}$ = 0.08	$\bar{Z}$ = 0.96	
SS_1 = 4.77	SS_2 = 24.0	
df = 79		

Group 2 (Y)	Group 3 (Z)	t Value
N = 26	N = 27	8.91*
ΣG.R. = 29	ΣG.R. = 38	
ΣG.R.^{2} = 39	ΣG.R.^{2} = 60	
$\bar{Y}$ = 0.72	$\bar{Z}$ = 0.96	
SS_1 = 18.0	SS_2 = 24.0	
df = 79		

Group 1 (X)	Group 2 (Y)	t Value
N = 3	N = 26	11.81*
ΣG.R. = 3	ΣG.R. = 29	
ΣG.R.^{2} = 5	ΣG.R.^{2} = 39	
$\bar{X}$ = 0.08	$\bar{Y}$ = 0.72	
SS_1 = 4.77	SS_2 = 18.0	
df = 79		

*$p < .05$.

NOTE: N means number of students repeating grade(s), not total number of students.

higher than for delinquent youths.

Conversely, failure was significantly lower for Group 1 subjects as compared to the other two groups. Again, non-delinquent students failed significantly less frequently than probationary-delinquent and delinquent subjects; probationary delinquents' failure rate was significantly less as compared to delinquents. Values derived from *t* testing confirmed the differences.

Data deriving from LTIT instrument administration provided intelligence scores--the final factor considered within the academic achievement variable cluster--for all study subjects. The mean I.Q. score for Group 1 subjects (rounded off) was 109 and for Group 2 students, 98. For delinquent students in Group 3, the mean average was 90. Table 4 presents a summary of the analysis of variance for these data. Degrees of freedom, sums of squares, and mean squares for both sources of variance--among and within groups--are listed. The within-group mean square has an expected value equal to the population mean squared and is, therefore, an unbiased estimator for the common variance. The value derived from *F*-test computation is included, where *F* represents the ratio of mean squares among and within groups.

As indicated in the table, the calculated value of 8.72 for *F* exceeded the tabular value at both the .05 and .01 levels of probability. It can be concluded, thus, that the population means are significantly different--that is,

that the intelligence scores of sample subjects differ significantly from group to group. Because I.Q. scores were highest for Group 1, it can be concluded that I.Q. was significantly higher for non-delinquent students as compared to probationary-delinquent and delinquent subjects.

TABLE 4

SUMMARY OF ANALYSIS OF VARIANCE FOR I.Q. SCORES FOR THE THREE SAMPLE GROUPS

Source of Variance	df	SS	MS	F Value
Among groups	2	33,218	1160	8.72**
Within groups	117	722	133	
Total	119	33,940		

*p<.05.
**p<.01.

Analysis of Self-Concept Data

Self-concept data derived from administration of four test instruments: the Body Cathexis (BC) and Self-Cathexis (SC) scales, the Hunt, Singer, and Cobb Low Self-Esteem Test (HLSE), and the Rosenberg Self-Esteem Test (RSE). Table 5 presents the average mean scores for the BC and SC scales for all three sample population groups. Sums of scores and the average mean of combined scale scores are included.

Computed t values from BC-SC scores for three group comparisons are provided in Table 6. Sums of scores, sums of scores squared, average means and sum of squares for each comparison are included.

TABLE 5

MEAN AVERAGE SCORES FOR THREE SAMPLE GROUPS ON BC-SC SCALES

Scale	Group 1 (X)	Group 2 (Y)	Group 3 (Z)
Body Cathexis	N = 40	N = 40	N = 40
	$\xi BC = 141.85$	$\xi BC = 132.04$	$\xi BC = 119.62$
	$\overline{BC} = 3.54$	$\overline{BC} = 3.20$	$\overline{BC} = 2.99$
Self-Cathexis	N = 40	N = 40	N = 40
	$\xi SC = 146.25$	$\xi SC = 132.79$	$\xi SC = 106.85$
	$\overline{SC} = 3.65$	$\overline{SC} = 3.41$	$\overline{SC} = 2.67$
Combined Scales	$\overline{BC} + \overline{SC} = 3.59$	$\overline{BC} + \overline{SC} = 3.36$	$\overline{BC} + \overline{SC} = 2.83$

Total scores on the HLSE instrument derived from the sum of responses indicating agreement on the instrument's first eight statements and responses indicating disagreement on the test's last three items. The higher the score, the higher the respondent's feelings of self-esteem. Table 7 presents *t* values for three group comparisons with regard to HLSE data. Total score and the mean average score on the test for each of the three subject groups are included. Significance was tested at the .05 level of critical probability for all derived *t* values for the appropriate degrees of freedom. An asterisk identifies any *t* values determined to be significant according to tabulated values.

The RSE instrument is comprised of six "scale stems," or parts, containing a total of ten statements. Test scores represented the total number of positive responses as

TABLE 6

t-TEST COMPUTATIONS FROM BC-SC SCORES:
THREE GROUP COMPARISONS

Group 1 (X)	Group 3 (Z)	t Value
$N = 40$	$N = 40$	
$\bar{X} = 3.59$	$\bar{Z} = 2.83$	
$\Sigma X_2 = 288.1$	$\Sigma Z_2 = 226.47$	4.86*
$\Sigma X^2 = 41,510.5$	$\Sigma Z^2 = 25,725.8$	
$SS_1 = 39,435.5$	$SS_2 = 24,443.5$	
$df = 78$		
Group 2 (Y)	**Group 3 (Z)**	**t Value**
$N = 40$	$N = 40$	
$\bar{Y} = 3.36$	$\bar{Z} = 2.83$	
$\Sigma Y_2 = 264.83$	$\Sigma Z_2 = 226.47$	3.22*
$\Sigma Y^2 = 35,067.8$	$\Sigma Z^2 = 25,725.8$	
$SS_1 = 33,314.4$	$SS_2 = 24,443.5$	
$df = 78$		
Group 1 (X)	**Group 2 (Y)**	
$N = 40$	$N = 40$	
$\bar{X} = 3.59$	$\bar{Y} = 3.36$	
$\Sigma X_2 = 288.1$	$\Sigma Y_2 = 264.83$	1.59
$\Sigma X^2 = 41,510.5$	$\Sigma Y^2 = 35,067.8$	
$SS_1 = 39,435.5$	$SS_2 = 33,314.4$	
$df = 78$		

*$p < .05$.

TABLE 7

t VALUES FROM HLSE SCORES: THREE GROUP COMPARISONS

Individual Group Computations		t Values (df = 78)
Group 1 (X):	N = 40	Groups Compared: 1 and 3
	$\Sigma X = 318$	$t = 3.47^{**}$
	$\bar{X} = 7.95$	
Group 2 (Y):	N = 40	Groups Compared: 2 and 3
	$\Sigma Y = 275$	$t = 1.69^{*}$
	$\bar{Y} = 6.87$	
Group 3 (Z):	N = 40	Groups Compared: 1 and 2
	$\Sigma Z = 212$	$t = 1.12$
	$\bar{Z} = 5.30$	

*$p < .05$.
**$p < .01$.

determined for each scale stem. Computed t values for three group comparisons are provided in Table 8. Again, total score and the mean average score on the test are included for each subject group.

It is important to note that the t test was used instead of the Critical Ratio (CR) test because of a necessary condition required before the CR test can be applied. According to Garrett, among others, the CR test can only be used when certain conditions prevail.[1] One of the most

[1]Henry E. Garrett, Elementary Statistics (New York: Longmans, Green, and Co., 1956); also see Fred Kerlinger, Foundations of Behavioral Research (New York: Holt, Rinehart, and Winston, 1973); and David W. Blakeslee and William G. Chinn, Introductory Statistics and Probability: A Basis for Decision Making (Boston: Houghton Mifflin, 1971).

important of these conditions is that there should be at least 50 scores in the samples being compared. When there are fewer than 50 scores, the t test is recommended instead.

TABLE 8

t VALUES FROM RSE SCORES: THREE GROUP COMPARISONS

Individual Group Computations		t Values (df = 78)
Group 1 (X):	N = 40	Groups Compared: 1 and 3
	$\Sigma X = 313$	$t = 5.97^{**}$
	$\bar{X} = 7.82$	
Group 2 (Y):	N = 40	Groups Compared: 2 and 3
	$\Sigma Y = 308$	$t = 4.66^{**}$
	$\bar{Y} = 7.70$	
Group 3 (Z):	N = 40	Groups Compared: 1 and 2
	$\Sigma Z = 200$	$t = 0.93$
	$\bar{Z} = 5.00$	

*p < .05.
**p < .01.

In sum, t values derived from the four test instrument scores for sample population groups with regard to self-concept levels produced important findings. In all cases no significant differences were found as regards the self-concept levels of non-delinquent subjects, Group 1, and probationary delinquents, Group 2. On the other hand, significant differences were revealed in all cases between control subjects and delinquents. Statistically significant differences were also produced between probationary

delinquents and delinquents. The following can thus be concluded: (1) that non-delinquent students and probationary delinquents did not differ significantly with regard to self-concept levels; (2) that both non-delinquents and probationary delinquents had positive self-concept levels; (3) that non-delinquents and probationary-delinquent subjects held significantly more positive self-concept views as compared to delinquent students; and (4) that delinquents had relatively negative views, or levels, of self-concept.

Analysis of School Attitude Data

The Reckless-Dintz Scale (RDS) produced data on attitudes toward school. Scores were derived from the instrument's six subscales: Capacity to Learn (CL), Value of Education (VE), Legitimacy of School (LS), Teachers-Academic (T-A), Teachers-General (T-G), and Teachers-Personal (T-P). Subscale scores, mean average scores, and total scale mean average for each of the sample population groups from RDS instrument administration are presented in Table 9.

Analysis of variance was also performed on the school attitude data. Table 10 provides a summary of ANOVA computations. Sums of squares, mean squares, and degrees of freedom for, among, and within group variances are included. The F value deriving from the ratio of mean squares is also listed. Significance was determined at the .05 critical probability level for the appropriate degrees of freedom.

Data analysis again produced important results. For combined tabulations non-delinquents held significantly more

TABLE 9

MEAN AVERAGES AND TOTAL MEAN AVERAGE FOR THREE SAMPLE GROUPS ON RDS SUBSCALES

Subscale	Group 1 (X)	Group 2 (Y)	Group 3 (Z)
(1) Capacity to Learn (CL)	N = 40	N = 40	N = 40
	$\Sigma X = 134$	$\Sigma Y = 135$	$\Sigma Z = 79$
	$\overline{X} = 3.35$	$\overline{Y} = 3.37$	$\overline{Z} = 1.98$
(2) Value of Education (VE)	N = 40	N = 40	N = 40
	$\Sigma X = 117$	$\Sigma Y = 97$	$\Sigma Z = 88$
	$\overline{X} = 2.93$	$\overline{Y} = 2.43$	$\overline{Z} = 2.20$
(3) Legitimacy of School (LS)	N = 40	N = 40	N = 40
	$\Sigma X = 162$	$\Sigma Y = 131$	$\Sigma Z = 99$
	$\overline{X} = 4.05$	$\overline{Y} = 3.28$	$\overline{Z} = 2.48$
(4) Teachers-Academic (T-A)	N = 40	N = 40	N = 40
	$\Sigma X = 115$	$\Sigma Y = 108$	$\Sigma Z = 100$
	$\overline{X} = 2.88$	$\overline{Y} = 2.70$	$\overline{Z} = 2.50$
(5) Teachers-General (T-G)	N = 40	N = 40	N = 40
	$\Sigma X = 160$	$\Sigma Y = 118$	$\Sigma Z = 95$
	$\overline{X} = 4.00$	$\overline{Y} = 2.95$	$\overline{Z} = 2.38$
(6) Teachers-Personal (T-P)	N = 40	N = 40	N = 40
	$\Sigma X = 184$	$\Sigma Y = 141$	$\Sigma Z = 98$
	$\overline{X} = 4.60$	$\overline{Y} = 3.53$	$\overline{Z} = 2.45$
Combined Scale Mean Average	$\overline{X} = 3.63$	$\overline{Y} = 3.04$	$\overline{Z} = 2.33$

TABLE 10

SUMMARY OF ANALYSIS OF VARIANCE FOR SCHOOL ATTITUDE SCORES FOR THE THREE SAMPLE GROUPS

Source of Variance	df	SS	MS	F Value
Among groups	2	2383	603	6.93*
Within groups	117	636	87	
Total	119	3129		

*$p < .01$.

positive school attitudes as compared with probationary delinquents and delinquents. However, mean average scores on two instrument subscales revealed no significant difference between non-delinquent students and probationary delinquents. In other words, Groups 1 and 2 did not significantly differ on the CL and T-A subscales. As regards the VE subscale, probationary delinquents and delinquents did not differ significantly.

Analysis of variance confirmed that the differences between the three groups as pertained to total school attitudes were significant. The computed F value of 6.93 exceeded the significance value at both the .05 and the .01 critical probability levels.

Analysis of Anxiety Data

The TMAS instrument provided two types of data--manifest anxiety scores and Lie Scale scores--to be used in analyzing anxiety levels of the sample population. The Lie Scale included in the instrument was designed specifically

to provide an index of the subject's tendency to falsify his or her responses to anxiety test items.[2] The index of the level of manifest anxiety was obtained by summing the number of "yes" responses on all 53 statements of the TMAS instrument. The index of the subject's tendency to falsify responses on the anxiety items was the sum of 11 items. Specifically, TMAS statements 5, 10, 17, 21, 30, 34, 36, 41, 47, 49, and 52 comprised the Lie Scale.

Mean averages of manifest anxiety and Lie Scale scores for the study's three sample groups from TMAS test administration are presented in percentage form in Table 11. As indicated, non-delinquents and probationary delinquents showed little difference with regard to manifest anxiety levels. On the other hand, a noticeable difference appeared between delinquents' manifest anxiety level and those of the other two groups. It can thus be concluded that delinquents held significantly higher levels of manifest anxiety as compared to non-delinquents and probationary delinquents.

As regards the tendency to falsify responses to anxiety test items, no differences were produced between probationary delinquents and delinquents. Non-delinquents, however, produced a significantly lower Lie Scale score as compared to Groups 2 and 3. It can thus be concluded that non-delinquents were significantly less inclined to falsify responses on anxiety test items as compared to probationary

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[2]Alfred Castaneda et al., "The Children's Form of the Manifest Anxiety Scale," Child Development 27 (September 1956): 317-26.

TABLE 11

MEAN AVERAGE PERCENT SCORES FOR THREE SAMPLE GROUPS ON TMAS SCALES

Scale	Group 1 (X)	Group 2 (Y)	Group 3 (Z)
Manifest Anxiety	N = 39	N = 38	N = 40
	$\Sigma X = 1586$	$\Sigma Y = 1662$	$\Sigma Z = 2261$
	$\overline{X} = 40.6\%$	$\overline{Y} = 43.7\%$	$\overline{Z} = 56.5\%$
Lie Scale	N = 40	N = 38	N = 40
	$\Sigma X = 547$	$\Sigma Y = 729$	$\Sigma Z = 766$
	$\overline{X} = 13.8\%$	$\overline{Y} = 19.10\%$	$\overline{Z} = 19.15\%$

delinquents and delinquents. It is important to note, however, that all three sample groups produced low Lie Scale scores. Thus no one group evidenced a significantly high inclination to falsify responses on anxiety test items.

Analysis of Combined Variable Data

To provide the data needed to test two of the study's hypotheses, it was necessary to group data pertaining to three of the study's major variables: intelligence, academic achievement, and reading achievement. Table 12 presents mean average scores on the variables for Groups 3 and 1. Tests of significance were undertaken previously to compare two groups' scores on each of the variables. These computed values have been included in the table. An asterisk immediately follows a value of significance. Significance was noted at the .05 critical probability level.

TABLE 12

COMBINED VARIABLE COMPARISON FOR DELINQUENTS AND NON-DELINQUENTS: ACADEMIC ACHIEVEMENT, INTELLIGENCE, READING ACHIEVEMENT

Variable	Group 3 (Z) Delinquents	Group 1 (X) Non-Delinquents	F or t Value
(1) Academic Achievement (No. of grades repeated)	$\Sigma Z = 38$	$\Sigma X = 3$	$F = 14.66^{**}$ (Group 1 significantly higher)
(2) Intelligence (I.Q. score)	$\overline{Z} = 90$	$\overline{X} = 109$	$F = 11.6^{**}$ (Group 1 significantly higher)
(3) Reading Achievement (Reading test score)	$\overline{Z} = 22.3$	$\overline{X} = 50.6$	$t = 4.81^{**}$ (Group 1 significantly higher)

Total number of variables significantly higher:

Group 3 = 0
Group 1 = 3

$^{*}p < .05$.
$^{**}p < .01$.

NOTE: Because Group 1 "No. of grades repeated" was significantly lower, the variable "Academic Achievement" for Group 1 was significantly higher.

Table 13 contains similar information for the same purpose. Delinquent subjects were, however, compared to probationary-delinquent students in this case. The listing provides mean average scores for both groups on intelligence, academic achievement, and reading achievement in the form of I.Q. scores, number of school grades repeated, and reading

TABLE 13

COMBINED VARIABLE COMPARISON FOR DELINQUENTS AND PROBATIONARY DELINQUENTS: ACADEMIC ACHIEVEMENT, INTELLIGENCE, READING ACHIEVEMENT

Variable	Group 3 (Z) Delinquents	Group 2 (Y) Prob. Delinquents	F or t Value
(1) Academic Achievement (No. of grades repeated)	$\Sigma Z = 38$	$\Sigma Y = 29$	$F = 10.9^{**}$ (Group 2 significantly higher)
(2) Intelligence (I.Q. score)	$\bar{Z} = 90$	$\bar{Y} = 98$	$F = 11.6^{**}$ (Group 2 significantly higher
(3) Reading Achievement (Reading test score)	$\bar{Z} = 22.3$	$\bar{Y} = 33.7$	$t = 1.68^{*}$ (Group 2 significantly higher)

Total number of variables significantly higher:

Group 3 = 0
Group 2 = 3

*$p < .05$.
**$p < .01$.

NOTE: Because Group 2 "No. of grades repeated" was significantly lower, the variable "Academic Achievement" for Group 2 was significantly higher.

test scores. Values for *t* and *F* derived from previous group comparisons are included. Again, any value of significance is identified by an asterisk.

Table 14 presents the information necessary for testing a second hypothesis of the study as regards combined variables. The table provides the sum or the mean average

TABLE 14

COMBINED VARIABLE COMPARISON FOR PROBATIONARY DELINQUENTS AND NON-DELINQUENTS: ACADEMIC ACHIEVEMENT, INTELLIGENCE, READING ACHIEVEMENT

Variable	Group 2 (Y) Prob. Delinq.	Group 1 (X) Non-Delinq.	F or t Value
(1) Academic Achievement (No. of grades repeated)	$\Sigma Y = 29$	$\Sigma X = 3$	$F = 11.81^{**}$ (Group 2 significantly lower)
(2) Intelligence (I.Q. score)	$\bar{Y} = 98$	$\bar{X} = 109$	$F = 11.6^{**}$ (Group 2 significantly lower)
(3) Reading Achievement (Reading test score)	$\bar{Y} = 33.7$	$\bar{X} = 50.6$	$t = 1.81^{**}$ (Group 2 significantly lower)

Total number of variables significantly lower:

Group 2 = 3
Group 1 = 0

$^{*}p < .05$.
$^{**}p < .01$.

scores for the same three variables as before, but in this case for probationary-delinquent adolescents (Group 2) and non-delinquent students (Group 1). F or t values previously computed in single-variable group comparisons are included.

Similar data is contained in Table 15. The comparison this time, however, is between probationary-delinquent and delinquent adolescents. Again, F and t values computed previously are included. For all computed

TABLE 15

COMBINED VARIABLE COMPARISON FOR PROBATIONARY DELINQUENTS AND DELINQUENTS: ACADEMIC ACHIEVEMENT, INTELLIGENCE, READING ACHIEVEMENT

Variable	Group 2 (Y) Prob. Delinq.	Group 3 (Z) Delinquents	F or t Value
(1) Academic Achievement (No. of grades repeated)	$\Sigma Y = 29$	$\Sigma Z = 38$	$F = 8.91^{**}$ (Group 2 significantly higher)
(2) Intelligence (I.Q. score)	$\bar{Y} = 98$	$\bar{Z} = 90$	$F = 11.6^{**}$ (Group 2 significantly higher)
(3) Reading Achievement (Reading test score)	$\bar{Y} = 33.7$	$\bar{Z} = 22.3$	$t = 1.68^{*}$ (Group 2 significantly higher)

Total number of variables significantly higher:

Group 2 = 3
Group 3 = 0

*$p < .05$.
**$p < .01$.

values significance was determined at the .05 critical level of probability for appropriate degrees of freedom. Asterisks serve to identify significant values. The total number of factors found to produce significant differences for each group is included.

Data analysis for comparisons of two groups on a combination of three variables produced important findings. As regards intelligence, academic achievement, and reading

achievement, delinquent students produced significantly lower mean average scores in all cases. Probationary delinquents produced significantly lower mean average scores for all three variables as compared to non-delinquent subjects. As compared to delinquents, however, probationary-delinquent youth had significantly higher scores all three times.

Chapter Summary

The data resulting from the testing were presented and analyzed in this chapter. Analysis was conducted for individual variables--academic achievement and failure, self-concept, attitude toward school, and anxiety--and for combined variables for the three groups comprising the sample population.

In regard to academic achievement and failure, data analysis revealed significant findings. Reading achievement for non-delinquent adolescents was found to be significantly higher as compared to the levels for probationary delinquents and delinquents. Conversely, failure was found to be significantly lower for non-delinquents than for the other two groups. Intelligence (I.Q.) scores also differed significantly. Non-delinquents had significantly higher intelligence mean averages than the other two groups. The number of grades repeated (academic failure) was revealed to be significantly lower for non-delinquents; probationary delinquents, in turn, repeated significantly fewer grades than delinquents.

Important results were derived from data analysis in the area of self-concept as well. In all cases, non-delinquent adolescents and probationary-delinquent students did not significantly differ. It was concluded, thus, that the two groups of subjects had significantly positive concepts of self. Probationary delinquents had significantly more positive concepts of self as compared to delinquents, however. Delinquent students were found to have a relatively negative view of self.

Analysis of variance confirmed results derived from tabulations indicating that there were significant differences among the study's sample population groups with regard to school attitudes. For combined measures, significantly more positive school attitudes were found for non-delinquents. For the single measures, Capacity to Learn and Teachers-Academic, no significant differences in attitudes were found for non-delinquents and probationary delinquents. In regard to the Value of Education measure, the attitudes of probationary delinquents and delinquents did not differ significantly.

For delinquents, manifest anxiety levels were found to be significantly higher for delinquents as compared to subjects in the other two groups. Non-delinquents produced a significantly lower Lie Scale score--that is, non-delinquents were significantly less inclined than the other students to falsify responses to anxiety test items. Low Lie Scale scores derived, however, for all student groups.

Data analysis for combined variables also revealed significant facts. It was noted that, to provide data for testing two of the study's hypotheses, it was necessary to group data for three variables: intelligence, academic achievement, and reading achievement. Delinquent youths were found to have significantly lower scores than probationary-delinquent and non-delinquent adolescents in all three cases. Probationary delinquents, on the other hand, produced significantly lower scores than non-delinquents but significantly higher scores than delinquents in all three cases.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Of all the varieties of adolescent disturbance, the most characteristic and certainly the most socially significant is juvenile delinquency. Studies of delinquency have focused on psychological, social, physical, and biological defects in efforts to provide explanations.[1] But the phenomenon has yet to be explained in precise terms because of continuing definitional vagueness and ambiguity. Thus empirical data have yet to be accumulated positively establishing relationships between various characteristics, variables, and factors and juvenile delinquency.

The basic problems of the study centered on the question whether juvenile delinquency could be identified by a specific pattern of factors; secondly, if such a factor pattern was amenable to identification, the question was asked whether the variables were significantly associated

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[1]G. J. Jurkovic and N. M. Prentice, "Dimensions of Moral Interaction and Moral Judgment in Delinquents and Nondelinquents," Journal of Consulting Clinical Psychology 42 (April 1974): 256-62; M. Garrett and J. F. Short, "Social Class and Delinquency: Predictions and Outcomes," Social Problems 22 (1975): 368-83; also M. D. Casey et al., "YY Chromosomes and Antisocial Behavior," Lancet 2 (1966): 859-60.

with the phenomenon of delinquency. The significance of the investigation lay in its potential to empirically validate Glasser's theoretical position and in its possible utility value for schools currently experiencing increased delinquency problems.

This chapter concludes the investigation. The aim of this portion of the study is to relate the research and the results to the whole of the study.

Summary of Research and Findings

The theoretical framework of the study was based largely on Glasser's theory. His orientation stressed the importance of several variables and factors in combination as a means of identifying the phenomenon of delinquency in adolescents. According to this view, such variables as self-concept, attitudes toward school, anxiety, and school achievement, among others, are held to have a significant effect, directly and indirectly, on the incidence of juvenile delinquency.

The purpose of the investigation was to assess the extent to which juvenile delinquents differed significantly from non-delinquents in terms of self-esteem and self-concept levels; attitudes toward school; levels of school achievement; school ability; and anxiety. The investigation was expected to shed light on Glasser's view of the relationship between school failure and delinquency and other concomitants of delinquent behavior.

Subjects of the study were male students between the

ages of 14 and 16 attending three schools in two towns in British Columbia. The sample population was subdivided into three groups: a control group of non-delinquents, one experimental group of probationary-delinquent adolescents, and a second experimental group of delinquents. The sample population consisted of a total of 120 students, 40 of whom were randomly selected from each school.

Test materials supplemented school records to provide the data for analysis. Information on intelligence was supplied by the Lorge-Thorndike Intelligence Test (LTIT) in terms of I.Q. scores. Reading achievement data derived from administration of the Gates-MacGinitie Diagnostic Reading Test (GMRT). The data on attitudes toward school were provided by six subscales of the Reckless-Dintz (RD) Scale. Four test instruments supplied the data on self-concept: the Hunt, Singer, and Cobb Low Self-Esteem Test (HLSE), the Body Cathexis (BC) and Self-Cathexis (SC) Scales, and the Rosenberg Self-Esteem Scale (RSE). Data pertaining to anxiety, finally, derived from Taylor's Manifest Anxiety Scale (TMAS) and the Lie Scale index contained in the TMAS test instrument.

The methodology employed in the investigation included both analysis of variance (ANOVA) techniques and statistical analysis of test instrument data. Specifically, the study employed both t and F testing to test groups statistically for significant differences. Computed values were compared to table values for appropriate degrees of

freedom to determine significance at the .05 level of critical probability.

Separate statistical analyses were required to assess differences among groups for each of four major variables--academic achievement and failure, self-concept, attitudes toward school, and anxiety--and for one specific combination of variables: intelligence, academic achievement, and reading achievement. In this manner data were provided to test the study's eight hypotheses.

Findings

Statistical analysis developed important findings. Reading achievement for non-delinquents was found to be significantly higher as compared to probationary-delinquent and delinquent adolescents. School failure in terms of the number of grades repeated was found to be significantly higher in delinquent youth. Intelligence scores also significantly differed among the groups. The intelligence quotient for non-delinquents was significantly higher than for probationary delinquents and delinquents.

As regards self-concept, data analysis revealed that two subject groups did not significantly differ and that they held positive concepts of self: non-delinquents and probationary delinquents. Probationary delinquents, however, were found to have significantly more positive self-concepts than delinquents. The mean average score on the BC-SC Scales for probationary delinquents was 3.36, for

example, as compared to a mean average of 2.83 for delinquents. In addition, a *t* value of 1.69 was produced when HLSE scores for the two groups were tested. The value was significant at the .05 critical probability level.

Statistically significant differences were produced with regard to attitudes toward school. Analysis of combined subscale score data revealed that non-delinquents held significantly more positive attitudes towards school than did the other two sample groups. No significant differences were produced, however, on two separate subscales for non-delinquents and probationary delinquents. In other words, both groups' attitudes toward academic teachers and capacity to learn did not differ; both were significantly positive.

Manifest anxiety levels were found to be significantly higher in delinquents. Delinquents produced a 56.5 percent manifest anxiety score; non-delinquents had a 40.6 percent score, and probationary delinquents, 43.7 percent. The tendency to falsify responses to anxiety test items was low for all three groups, however. Still, non-delinquents had significantly lower scores than the other subjects.

Testing of Hypotheses

Eight hypotheses were posited by the investigation. Each is restated below, followed by a discussion of results and testing.

1. Delinquent adolescents have significantly lower I.Q. scores, achievement scores, and reading scores, as

operationally defined by the test instruments of the study, than probationary-delinquent and non-delinquent youth.

Data analysis of combined variables provided the data to test this hypothesis. Mean average scores of 22.3 for delinquents, 33.7 for probationary delinquents, and 50.6 for non-delinquents indicated significantly lower achievement levels in reading for the delinquent group. A *t* value of 1.57 from delinquent/probationary delinquent group testing and a *t* of 4.81 derived from testing of non-delinquent and delinquent adolescents with regard to reading achievement confirmed the results. An *F* value of 14.66--significant at both the .05 and .01 critical probability levels--clearly showed significant differences in academic achievement, expressed in terms of the numbers of grades repeated. Delinquents, thus, showed significantly less achievement (significantly more grades repeated) than Groups 1 and 2.

As regards intelligence, mean average I.Q.s of 90 for delinquents, 98 for probationary-delinquent youth, and 109 for non-delinquents confirmed the fact that delinquents had significantly lower intelligence quotients than the other subjects. In sum, the results proved the first hypothesis true.

2. Delinquent youths have significantly higher levels of anxiety than probationary-delinquent and non-delinquent youths.

"Manifest anxiety level" was operationally defined

by the mean average percentage score on the TMAS instrument and by the mean average Lie Scale percentage score on an index of the TMAS instrument. Data analysis produced manifest anxiety mean averages of 40.6, 43.7, and 56.5 for Groups 1, 2, and 3 respectively. In sum, statistical analysis proved the second hypothesis true: delinquent youths had significantly higher levels of anxiety as compared to other student groups.

3. Delinquent adolescents have significantly lower scores on tests designed to measure self-esteem (self-concept) than probationary-delinquent and non-delinquent adolescents.

As noted, scores on the HLSE, BC-SC, and RSE test instruments operationally defined the variable, self-concept. Values for t of 4.86, 3.47, and 5.97 derived from statistical testing of BC-SC, HLSE, and RSE scores for delinquent and non-delinquent adolescents indicated that delinquents had significantly lower levels of self-esteem. Statistical testing of delinquent and probationary-delinquent youth on BC-SC, HLSE, and RSE scores produced t values of 3.22, 1.69, and 4.66 respectively. All were significant at the .05 critical probability level. Thus data analysis provided statistically significant indications that delinquents had lower levels of self-esteem than probationary delinquents. In sum, data analysis supported the third hypothesis.

4. Delinquent youths repeat a significantly greater number of grades, with failure operationally defined by

school records, than probationary-delinquent and non-delinquent adolescents.

Statistical testing employed t-test computations in this case. Comparison of the delinquent and non-delinquent groups produced a t value of 14.66, significant at both the .05 and .01 levels of critical probability. For delinquent and probationary-delinquent group comparisons, a t of 11.81 was produced. This value was also significant at both probability levels. Results of the study therefore statistically verified the statement that delinquent adolescents repeat a significantly greater number of grades and thus fail in school significantly more often than non-delinquent and probationary-delinquent youths.

5. Probationary-delinquent adolescents have significantly lower I.Q. scores, and achievement and reading scores, than non-delinquent youths, but significantly higher scores on the same variables than delinquent youngsters.

Data analysis of combined variables produced important results in this respect. F values of 10.9 and 11.6 and a t value of 1.68 were arrived at for comparisons on academic achievement, intelligence, and reading achievement variables between probationary delinquents and delinquents. All values were significant at the .05 probability level. Results of the study therefore statistically verified the statement that probationary delinquents had significantly higher scores for all three variables than delinquents.

F values of 11.81 and 11.6 and a t value of 1.81

were produced when academic achievement, intelligence, and reading achievement scores of probationary delinquents and non-delinquents were compared. Again all values were significant. Results thus showed significantly lower scores for probationary delinquents. In sum, the results of the study statistically confirmed Hypothesis 5.

6. Probationary-delinquent adolescents have significantly lower self-esteem scores than non-delinquent youths, but significantly higher scores as compared to delinquent adolescents.

To determine whether significant differences in self-concept existed between the probationary-delinquent and control groups, t testing was performed. Values of 1.59, 1.12, and 0.93 for t were produced from BC-SC, HLSE, and RSE test scores for the two groups. None of the t values was statistically significant.

In regard to the testing of probationary delinquents and delinquents, t values of 3.22, 1.69, and 4.66 were produced from BC-SC, HLSE, and RSE test scores respectively. All three computed values were significant at both levels of probability. It can thus be concluded that probationary-delinquent adolescents did not have significantly lower levels of self-esteem than non-delinquent youths but did have significantly higher self-concept levels as compared to delinquent adolescents.

7. Probationary-delinquent youths have significantly poorer school attitudes, as operationally defined by scores

on test instruments, than non-delinquents, but significantly better attitudes as compared with delinquent adolescents.

Data in regard to attitudes toward school derived from six subscales of the RDS instrument. Mean average subscale scores were combined to produce a composite mean average score of 3.04, 3.63, and 2.33 for the probationary-delinquent, non-delinquent, and delinquent groups respectively. Results indicated support for the hypothesis. An *F* value of 6.93 produced from analysis of variance confirmed the findings. The study concluded thus that the hypothesis was true: probationary delinquents held significantly poorer school attitudes than non-delinquents, but significantly better views than delinquents.

8. Probationary-delinquent adolescents repeat a significantly greater number of grades as compared to non-delinquents, but repeat a significantly lower number of grades as compared to delinquent juveniles.

Statistical analysis of academic failure data for comparison of probationary-delinquent and non-delinquent groups produced a *t* value of 1.81 which was statistically significant at both probability levels. For the probationary-delinquent and delinquent adolescents, a *t* of 1.68 derived from statistical testing. This value was also significant at both levels. In the former case, non-delinquents' scores were significantly higher; in the latter case, probationary delinquents had the higher scores. The results indicated that Hypothesis 8 was true: probationary

delinquent youngsters repeated a significantly greater number of grades as compared to non-delinquents, but a significantly lower number when compared to delinquent adolescents.

In sum, results of statistical testing of the study's hypotheses produced important findings. Seven out of eight hypotheses were empirically verified as a result of statistical testing of the data. For Hypothesis 5, however, it was found that probationary-delinquent juveniles did not have significantly lower levels of self-esteem than non-delinquent youths.

Conclusions

Based on the collected and analyzed data, the results of the investigation led to the following conclusions:

1. Delinquent juveniles have significantly lower I.Q. levels and achieve significantly less academically and in reading skills than probationary-delinquent and non-delinquent youth.

2. Delinquent adolescents have significantly higher levels of anxiety than probationary-delinquent and non-delinquent youngsters.

3. Delinquent adolescents repeat a significantly greater number of grades and thus fail in school significantly more frequently than probationary delinquents and non-delinquents.

4. Deli[illegible]uents have significantly lower levels of

self-esteem than probationary-delinquent and non-delinquent youth.

5. Probationary-delinquent adolescents have significantly lower intelligence quotients and achieve significantly less academically and in reading skills than non-delinquents, but have significantly higher I.Q.s and achieve significantly more in school and in reading achievement than delinquents.

6. Probationary-delinquent adolescents do not have significantly lower self-esteem levels as compared to non-delinquents, but do have significantly higher levels of self-esteem than delinquents.

7. Probationary-delinquent youths have significantly poorer attitudes toward school than non-delinquents, but significantly better attitudes as compared with delinquent youngsters.

8. Probationary-delinquent adolescents repeat a significantly greater number of grades and thus fail in school significantly more often than non-delinquents, but repeat significantly fewer grades and thus fail significantly less often as compared to delinquent youngsters.

9. The study further concludes that juvenile delinquency can be identified by a specific pattern of factors and that the variables taken into consideration by the present investigation were significantly associated with delinquency.

10. Finally, the results of the present investigation

indicate the importance of those variables suggested by Glasser as means of identifying juvenile delinquency. The results of the present study thus empirically support Glasser's theoretical position.

Implications

Important findings derived from the present investigation. While generalizations to larger populations cannot be undertaken due to the study's limitations as regards both size and scope, mention should be made of three important areas of implications. These include: (1) model development for trait pattern identification, (2) treatment and prevention programs, and (3) correctional education.

Model Development Implications

Much research attests to the fact that value patterns differ in delinquent and non-delinquent adolescents; but the cluster of personality factors making up the respective value patterns still need to be precisely identified and empirically validated.[2] It would appear that the findings of the present study provide theoretical investigations with a point of departure in this respect.

The literature has explained that the term

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[2]Donald R. Cressey and David A. Ward, Delinquency, Crime, and Social Process (New York: Harper and Row, 1969); Joseph Clark and Ellen Wenninger, "Goal Orientations and Illegal Behavior among Juveniles," Social Forces 24 (1963): 351-57.

"personality" refers to a group of characteristics and traits.[3] Unlike the term "intelligence," however, the personality traits are unrelated for the most part.[4] The clustering and empirical testing of a specific group of characteristics thus provide a trait pattern that can be used as a model. Such a model has a variety of applications and a number of dimensions for theoretical consideration.

The model can, for example, be used to posit hypotheses about a number of other adolescent problems. By regarding academic achievement behavior, academic attitudes, values of the self, and feelings of anxiety as expressions of a student's antisocial personality and behavioral development, a potentially useful model for understanding delinquent and other antisocial, norm-violating behavior (as alienated manifestations, for example) has been provided.

The results of the present study thus imply the need for developing a basic model for identifying and perhaps predicting delinquent behavior in adolescents. The available literature has indicated that, in many fields of endeavor, models are prototypes of theories because they make possible early conceptualizations and study of specific

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[3]Floyd L. Ruch, Psychology and Life (Chicago: Scott, Foresman and Co., 1967); also Aaron H. Esman, The Psychology of Adolescence (New York: International Universities Press, 1975).

[4]J. S. Wiggins et al., The Psychology of Personality (Reading, Mass.: Addison-Wesley, 1971); also A. Bandura and R. H. Walters, Social Learning and Personality Development (New York: Holt, Rinehart, and Winston, 1963).

phenomena.[5] Empirical support frequently derives from such early conceptualizations. If models can be used successfully in other diverse and unrelated areas, there is no reason why they cannot be used successfully for identification and possibly prediction of delinquency in juveniles. In this manner it would seem that the problem of reducing the concept of delinquency to definite, empirically measurable parameters would be solved. Empirical evidence in the form of correlational and factor analytic studies could follow.

In sum, wide variations clearly separate contemporary authorities as regards the basic forms, interpretations, and definitions of the construct of juvenile delinquency. Model development for explicit and precise factor pattern identification would bring authoritative opinion together into one unified view.

It is important to note, however, that a model is meant simply to clarify and yield information. How well it achieves these aims depends on its design. It cannot provide final answers; nor is it intended to do so. It serves its purpose if it provides fresh insights into the nature and characteristics of a phenomenon. Thus the study's implications as regards model development for trait pattern

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[5]John P. DeCecco, The Psychology of Learning and Instruction: Educational Psychology (Englewood Cliffs, N.J.: Prentice-Hall, 1968); John B. Carroll, "A Model of School Learning," Teacher's College Record 64 (1963): 723-33; also C. A. Laszlo et al., "A General Systems Framework for Social Systems," Behavioral Science 19 (1974): 79-92.

identification also implies continual modification and refinement of a model after it has been developed.

Implications for Treatment and Prevention Programs

The results of the present investigation also have implications for treatment and prevention programs. If juvenile delinquency can be defined in explicit, precise, and meaningful terms, action treatment plans would certainly be more likely to foster constructive social change and significantly more positive social and academic behavior on the part of delinquents. Without precise definition, however, treatment, rehabilitation, and prevention programs will continue to fall short of their ultimate goal of behavior modification.

For years investigators have assumed that delinquent behavior was essentially the result of social and personality disturbances occurring in the early childhood years.[6] These are, in large part, the assumptions upon which treatment and prevention approaches and programs have been and continue to be based. Important advances in both theory and research have been made in recent years, however. Glasser's work, for example, provided for landmark advances in theory

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[6]Arthur T. Jersild, The Psychology of Adolescence (New York: Macmillan, 1963); Lewis T. Empey, "Delinquency Theory and Recent Research," Journal of Research in Crime and Delinquency 4 (January 1967): 32-42; also Robert M. Goldenson, An Encyclopedia of Human Behavior (New York: Doubleday, 1970).

and theoretical orientation.[7] Other researchers have produced findings that significant numbers of juvenile delinquents show concrete, definable educational differences in comparison to non-delinquent adolescents. The newer findings clearly challenge previous assumptions and at the same time the fundamental basis and theoretical orientation of many currently-existing rehabilitation and prevention programs. Indeed, the fact that four out of five adolescents and adult inmates in correctional schools and institutions are repeat offenders provides clear evidence that rehabilitation through currently-existing plans simply has not occurred.

It is strongly suggested that programs aimed at significantly reducing the incidence of juvenile delinquency fail for two reasons: first, the important social, psychological, educational, and psychiatric factors that combine ultimately to create the delinquency condition have not yet been clustered into a specific trait pattern, subsequently identified, and empirically verified; secondly, the assumption that juvenile delinquency begins from personality or social disturbances occurring in very early preschool years is in error.

That the present investigation has identified a pattern of factors from several scientific disciplines as

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[7]William Glasser, Schools without Failure (New York: Harper and Row, 1969); William Glasser, "The Reality Frontier: Reality Therapy," Saturday Review, March 6, 1965, pp. 54-57.

having a significant combined influence on the occurrence of juvenile delinquency provides support for the first contention, as do recent research findings. As regards the second contention, Glasser's view identifies the school as the place where juvenile delinquency begins. Other handicaps and influencing factors can be more easily overcome, according to Glasser, if school failure does not exist.[8] School failure and low self-esteem are the crucial variables influencing delinquent behavior, according to this view, when combined with other factors such as poverty, poor parental relationships, and broken home environment; the other variables by themselves or in combination do not exert enough influence to create the phenomenon of delinquency.

In sum, Glasser's theoretical position provides support for the second reason given to explain rehabilitation program failure. The theoretical framework and rationale of the present investigation was based primarily on Glasser's view. Thus the results of the present study provide empirical support for the second contention.

Implications for Correctional Education

Glasser's theoretical position and the empirical support provided for Glasser's view in the findings of the present investigation offer evidence indicating that school failure may significantly contribute ultimately to the

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[8]Glasser, Schools without Failure, p. 26; William Glasser, Reality Therapy (New York: Harper and Row, 1965).

creation of the delinquency phenomenon. Such evidence points to the need for educational systems to examine more closely those particular institutional forces, policies, and practices that are believed to contribute most to the establishment of the failure identity.

The study's results imply that some modification and adjustments in public school programs could help to reduce the incidence of juvenile delinquency by decreasing the tendency of some children to establish a school-failure identity. The findings also imply that correctional education should give increased attention to the development of appropriate curriculum materials as regards the area of reading skills development and ability in particular. An educational program that gives the school-failure identity variable the fullest consideration would use every viable approach and technique to enhance the personality of students from low socioeconomic backgrounds with lower levels of intelligence; in addition, it would seize every opportunity to foster success experiences.

Recommendations

In light of the findings and conclusions, the following recommendations are made:

1. Future investigation should be conducted replicating the present study for the purpose of verifying or refuting the results obtained in the present investigation.

2. Further study of greater breadth and scope

should be conducted into the same general subject area. A larger sample population could be studied and more schools in other areas could be included.

3. Further investigation might be conducted as regards identification of other factors, characteristics, or traits that are believed to have a significant influence on the incidence of juvenile delinquency.

4. Finally, it is recommended that future research center on a concerted effort to develop and refine the trait pattern identification model suggested in the present study for the purpose of identifying and perhaps predicting delinquent behavior in juveniles. It is believed that such a model would go far to reduce the concept to empirically measurable parameters. Correlational and factor analytic studies could then be conducted to produce empirical evidence for validating the model.

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